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ABSTRACT

Contents of this issue are as follows: "Applied Suggestology in the United States: Suggestive-Accelerative Learning and Teaching" by Dean F. Held; "A Study of Suggestopedia Features that Can Be Omitted Once Students Learn How to Learn" by D.H. Schuster and P.J. Wardell; "Evaluation of the Suggestive-Accelerative Lozanov Teaching (SALT) Method in Teaching Earth Science to Low Socioeconomic Ninth Grade Students" by D.H. Schuster and S. Ginn; "Report on the School Experiment, 'Suggestopedia in Elementary School'" by Franz Beer; "What Makes It Work" by Wim Wenger and Susan Wenger; "Abstracts of Articles Published in the Bulgarian Technical Journal 'Suggestology and Suggestopedia'"; "Abstract of the Effects of Suggestive-Accelerative Learning and Teaching (SALT) on Creativity" by Jonathan D. Edwards; and Book review of "Suggestology and Outlines of Suggestopedy" by D.H. Schuster. D.F. Held's article criticizes the remedial reading approach, suggest benefits of the Suggestopedic reading approach, and provides an example of a classroom suggestopedic lesson. In "What Makes It Work," W. Wenger and S. Wenger presents principles and techniques that have been shown in practice in numerous workshops to be effective in developing new skills, learning in school, problem solving, and controlling one's autonomic processes. (SW)

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THE JOURNAL OF SUGGESTIVE-ACCELERATIVE LEARNING AND TEACHING

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Applied Suggestology in the United States: Suggestive-Accelerative Learning and Teaching

Dean F. Held

Abstract

Some benefits of the SALT method are looked at and an example of a classroom suggestopedic lesson is given in this article.

I want to express some of my biases regarding remedial reading instruction in our country and contrast that with Suggestopedic reading. I have found Suggestopedia to be a breath of fresh air in its application to remedial pedagogy. From my first day of teaching, I was very disturbed about some of the remedial practices and when I became a reading clinician, I became so much more disturbed.

One of the greatest concerns that I have about the American approach to remedial reading is that it has become extremely deficit oriented and is entirely deficit oriented in many, many, cases. The first thing that transpires when a child arrives at a reading clinic is that he or she is given a battery of tests. Ekwall, in his recent investigation, said that in some clinics as much as half of the allotted remedial time is spent in testing. This is perfectly foolish since a child who comes to a reading clinic is already uptight and very disturbed about not being able to read. When I started my reading practicum, at the University this fall, I asked my graduate students, "What is the first thing you are going to do when the kids arrive at the center?"

"We are going to give a Durrell Reading Analysis."

I replied, "The heck you are. You are going to teach these kids to love reading."

One learns to read by reading and once students begin to appreciate reading we can start working on some of the specific problems that they have. Instead of making the deficit, which is a negative suggestion, the focal point, we must give pleasure reading the emphasis. Let us bear in mind that a reading problem in our country carries a stigma second only to venereal disease.

Another one of my disagreements is that in many of the programs, in many of the centers throughout the country, phonic training is the focal point. In other words, remediation is all phonics. Upper grade students who have had reading problems have had phonics up to the frustration point. They just have not been able to learn through that mode but they continue to get more of the same.

I think the American educators are hung up on cause-effect relationships. By the time these students come to a reading center, it is very difficult to determine what is cause and what is effect and I tell my

student clinicians not to get hung up on that. We do want to make sure the child does not have a serious visual, auditory or neurophysiological problem of some kind, but we do not exhibit overt concern about cause.

Another concern I have about American remedial instruction, classroom corrective and developmental reading is the grouping practices. American teachers can not seem to survive without grouping and regrouping. Everything is grouped, categorized or color coded. I have been an elementary principal and I realize that when a first grade teacher has 30 students, she does not have too many alternatives but to group. It is difficult to manage more than ten first graders in an individualized type of a reading program. But, I believe that when you call students Bluebirds, Yellowbirds and Blackbirds we create a socio-suggested norm and that really interferes with learning. Levels of expectation are set early and children begin to operate at that level throughout the grades. There are many schools where there are, indeed, lock-step programs.

Peer separation creates many problems as well. It is very important for a student to belong to the total group. I think the worst thing one can do is to take a child out of the regular classroom and put him into a clinical type of setting. You are separating him from his peer group. I think if we give him special help, we are going to have to make other arrangements and do it out of the school scene in a private type of setting. I could give my son as one example. When he was in second grade, my wife and I were called into the school for a conference. The psychologist was there, the principal, the classroom teacher, the reading teachers and all meant well. They said, "We think you better send your son for a neurological test. This boy is dyslectic."

I said, "No, you are not going to do anything of the sort."

"Well, what do you want us to do?"

I replied, "I want you to let him alone. He is not ready for reading, yet. Just let him alone, please."

That is very reverse of what most parents would request when their child has a reading problem. It was my feeling that the child was better off if we did not draw any attention to his problem at all. So, we began reading to him at home and I had a hard time believing there was anything neurologically wrong with him. He has a tremendous interest in science and he could walk out of the door and say, "Dad, see the bird in that tree." I knew there was nothing wrong with that boy's visual discrimination. It was not until he was in the fourth grade when he was really willing to start reading back to us. I had to keep going back to the school and tell them, "I want him in the middle group, not the low group, and if the material is frustrating for him, give him help." He is now in the eighth grade and on the honor roll. He does not have a reading problem at all. But I know that if we had bombarded that child with tests, phonics programs and nothing more; he would probably be a non-reader today. I can cite many cases that are similar to that. So, I feel that in many ways, what we have been doing in our country is psycholinguistically unsound. I think there is a general disregard for how children

learn and how children use language. In contrast to that I think the Suggestopedic application has new hope to offer, not only to the disabled reader but to the teacher. When I discuss Suggestopedia, I refer to my own way of applying it. As children come to our center, each child is equal and deserves equal expectations.

I think it is more natural that a variety of problems exist in the same group. It is natural that a variety of reading levels are in existence because students can work together more naturally and help each other rather than reinforce each other's problems.

One of the great benefits of Suggestopedia and probably the most beneficial thing is that it gets at the avoidance techniques. For those of you who have worked with children who have reading problems, you know they develop every kind of avoidance technique possible. As soon as you give them a specific type of writing or reading task to do, they drop a pencil, throw something or use other kinds of avoidance ploys. I feel that in the work I've done in applying Suggestopedia to remedial reading there are some good hands on kinds of activities that really help me get through the shell that students have built around themselves. I think as I later go through one of the lesson plans you will see how I am applying some Suggestopedic techniques to attack this problem.

Suggestopedic instruction, at least my adaptation, would appear to be more sound psycholinguistically. First, I work on oral language through choral reading, creative dramatics and song. We use a great deal of language experience during the active session. (When students write about their own experiences, using their own vocabulary.) We do not teach words or sounds in isolation. Everything is taught in context or if taken out of context, we do not lose sight of the whole. I am not saying we do not teach phonics or any type of word attack skills, but this certainly is not the focal point. Word attack skills are handled incidentally as the need arises.

Secondly, I do not teach traditional rules of reading. Rules are not simple or accurate enough to help anyone learn to read. I am alluding to the fact that our language is not phonetically regular enough so that phonic reading rules are helpful. Thirdly, always teach letters as a part of a word and words as parts of sentences. Accept sensible reading without worrying about word-perfect performance. After all, we want students to read thoughts and ideas. Fourthly, encourage intelligent guessing; the use of context clues is important so the child can predict what is coming ahead. Finally, let readers make mistakes without penalty.

So, do not label students. Do not set low levels of expectation for them. Encourage (and this is probably the key) self-confidence and enjoyment because reading should bring its own reward. No one will become a good reader unless reading becomes something he values intrinsically. All the gadgets we use to try to motivate reading, I think, are a mistake. We use TV, CB, tape recorders and a multitude of media to motivate kids to read. In reality, what we are doing is promoting TV, CB and tape recorders. We have to sell reading as a thing in itself and it has

to start in the readiness program. This is where we must start developing appreciation and I believe this is a key element of the readiness program.

I am sure some of you might be interested in how I apply or how I use Suggestopedia in a remedial session. I pulled a lesson right out of my planbook so I could go through the sequence and give you a few ideas of what I do during a lesson.

The name of the lesson is "The Sinking of the Edmond Fitzgerald." You probably remember the song about the Edmond Fitzgerald which sank in Lake Superior in the fall of 1975.

The first part of the lesson I call the Preparation Phase. Here is where I attack what I was alluding to before when I said a student comes to the session with all these horrible feelings, low self-concept and a terrible attitude about reading. They have a tough shell around them and until you can get through that shell, you know everything you are doing seems to be a great waste of time. I can say that I have found the mind-calming techniques to be very helpful and so each day when they come in I take about five minutes to do some kind of physical relaxation exercise. Very often the wave of tension exercise is all I need to do when coupled with positive suggestion about how good the students feel. Some practitioners of Suggestopedia feel it is not necessary to do physical relaxation exercise, but I do it anyway since I believe it is really the suggestion that counts. During the same session, very often we will do a Zen type breathing exercise. I call Zen breathing merely having the child pay attention to his breathing. As he breathes in, he thinks in and as he breathes out, he thinks out. I try to get them to think about nothing for a short time until I get the feeling that everyone is relaxed and ready to proceed with the actual meat of the lesson. I am very careful to integrate what is happening in the latter part of the preparation phase with what will happen in the active and the passive. I make transition to the active phase by doing the White Cloud or other such exercise. Example: The student visualizes himself watching a cloud, relaxing and suddenly he becomes the cloud and from that point on we go on fantasy trips. (We are now in the active phase). What we did in this particular lesson was to become the cloud and we went out over Lake Superior to see for ourselves what actually happened to the ship, Edmond Fitzgerald. Did it tip over, did it break in half, did it explode or what happened to it? So, I ushered them out into the Lake and told them, "Now you see this ship, what is happening, what are you seeing, what do the waves look like, what are the men on the ship doing, etc." Try to get them to visualize this. This experience then becomes the material for the active phase by way of language experience. After they have experienced this we continue the active phase by writing about what they visualized and what they fantasized about. There are others I have used, such as: Flying Saucer, Hot Air Balloon or Magic Carpet to take them on fantasy trips. With the very young, I take them over a zoo, a park or whatever. They visualize all these places. I think visual imagery practice is very important for students who have reading problems. Students with

reading problems seem to lack in that area according to many of the studies that I have read. This is very important because, after all, if you enjoy reading, you enjoy it because of what it invokes. It invokes fantasy and imagery about what you are reading and children need practice doing this. It enhances the calm mind as well. While students are writing (active phase) I make a set of flash cards as I walk around to read what everyone is writing. I pull words that they seem to be having problems with out of context and I put them on the flash cards right then and there. So, while they are writing I am creating my materials for the passive session. I play soft music to make transition to the passive phase. I am not particular about what kind of music is played as long as it is not so lively that it aggravates moods instead of calming them down. I then show the students the words on the new flash cards and discuss the words with them. We spell them orally with the three (3) intonations. I remind them how easily they will remember the spelling and the meaning of the words as we enter the passive session.

Sometimes at the beginning of the passive, I do another mind-calming kind of exercise especially E.P.L.R. I tell them to relax and mentally visualize the words and this is when one can get at the incidental phonics (phonics unconscious, as I call it). During the passive, the lesson is merely an auditory exercise with mental word visualization. If it is a mono-syllabic word, I use the triad while spelling it. I say the word first, perhaps, using it in a sentence the way the student used it so it is in context. Then I will usually spell the word three times - in a very loud voice, in a very soft whisper voice and in a natural voice. If the word has several syllables such as "floating", I will do it differently. This is how I did "floating". FL-oating (loud)...and if it has a problem syllable, I repeat it a number of times (whispering) oat...oat...oat...(natural voice)...ing. I will do that about three times with each word.

I taught this word to John, one of my students, waited two weeks, and I asked him, "How do you spell floating?" The surprising thing about it was that he spelled it back to me correctly with the same intonation that I had used. I did another interesting thing with John. I was interested in knowing where he was picking up and remembering; was he remembering better from the active or the passive? I started teaching him some words in the active session that I was not giving him in the passive. After some time, I randomly selected thirty words from the active, thirty from the passive and we had a little spelldown. A very interesting thing happened. With words that I had taught him in the active phase he got perfect score: "zero". Now on the other hand, when I checked him on the words that I had taught him during the passive phase, a surprising thing happened in that he got twenty-nine out of the thirty correct. That is one case but I have seen similar things happen with some of the other students who I am working with.

If I use psychodrama of some kind, I generally do it in the active phase as an on-going thing. For example, as a result of the lesson about the sinking of the Edmond Fitzgerald, the students are going to do a shadow show about that happening. I think that sounds like a great idea

This is a brief example of how I sequence my Suggestopedic lessons. I always have a preparation, active and passive phase, a variety of topics and a variety of activities. I try to make them as meaningful as possible by integrating the three phases into a meaningful whole learning activity without sacrificing the basic premise of the approach. The lessons must permeate with positive suggestions, joy, hope and good learning will result.

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A Study of Suggestopedia Features That Can be Omitted Once Students Learn How to Learn

D. H. Schuster and P. J. Wardell

Iowa State University

Abstract

This pilot study investigated which features of suggestopedia can be omitted once students have used the method in learning. The volunteer subjects were students from university psychology classes; half of the students were male and half female, for a total of 16 subjects. Independent variables were suggestive positive atmosphere, early pleasant learning restimulation, sex of subject, dramatic presentation plus mind-calming, and imagery plus sensory projection. In the preliminary learning phase, the last two independent variables above were present and produced enhanced learning of rare English words as compared with the first list as a control. In the drop-out phase the independent variables were dropped out or deleted in various combinations. While there were several near significant trends ($p < .10$), only the variable of imagery plus sensory projection produced a significant drop ($p < .01$) when omitted. This variable thus may be critical for classroom teaching and further research is indicated.

Introduction

The purpose of this study was to investigate in an exploratory way which features of the Suggestive-Accelerative Learning and Teaching (SALT) method could be eliminated or dropped out once the students had learned how to learn with this method.

There are several interesting features of suggestive-accelerative learning and teaching or suggestopedia as it is called by Lozanov (1971). The method utilizes an indirect suggestive positive atomosphere to lead students to expect that they can learn efficiently, easily and well, while having fun in the process. Part of the suggestion comes from the learning atmosphere, but part comes from indirect suggestion, such as having students recall and re-experience a previous pleasant learning experience with as complete sensory recalls as possible. Then students are requested to learn the present material with that same feeling and in the same way. In addition, a deliberately dramatic and varied style of presentation is usually done. This may be preceded by mind-calming, wherein students are taught to concentrate by freeing their mind of present possibly distracting concerns of the day. Lastly, students are requested to produce vivid imagery as the material is being presented to them. This is in accord with the research of Aiken (1971). The instructor may present vivid images initially or the students may be told to project themselves imaginatively into the material and thus create their own visual, auditory and kinesthetic images. Schuster et al. (1975) reviewed research relevant to this area and provided procedures to operationalize the important variables.

Method

We used a mixed analysis of variance design. There were three between-group treatment factors; that is, a subject was given an experimental treatment, or he was not, exclusively. These factors were:

1. Suggestive positive atmosphere. In the present condition, music was playing in the background as students entered the room and students were told that learning would be easy, efficient and fun with this method. In the absent condition, this atmosphere-suggestion effect was omitted.

2. Early pleasant learning restimulation. When this variable was present, students were requested to recall an early pleasant learning experience and then to recall the details at a feeling-emotional level as completely as possible to provide a restimulation of the same high memory ability. Then students were requested to learn the list of words currently with that same ability and feeling. In the absent condition, this preliminary step was omitted before list presentation.

3. Sex of subject. Half of the subjects were male and half female students recruited as volunteers from undergraduate psychology classes. Subjects received course credit for having participated in this research project. There were two male and two female subjects for each cell or possible combination of the previous two factors. The total number of subjects was 4 x 4 = 16.

There were two within-subject factors; that is, each subject took all four possible combinations of these.

4. Dramatic presentation and mind calming. When present, students were requested to watch their breathing for two minutes before the list was presented to calm their mind and free it of extraneous distractions. Then the list was presented in a dramatic style: some words were presented normally, other words were presented in a loud declarative fashion, while yet approximately another third of the words was whispered to provide contrast.

5. Imagery-sensory projection. As each word was presented, the experimenter gave the subjects an image to help the subjects associate the word and its common meaning. These verbal images had been very carefully prepared in previous research. The subjects were also requested to feel that they themselves were these images and the words, and thus project themselves into each word and its common meaning to help learn the definition of the rare word.

6. Dependent variable. The measure of the dependent variable was the number of rare English words correctly remembered at acquisition. There were nine lists of twenty-five rare English words each as the criterion measure. The lists had all been prepared previously from rare English words that the experimenter and their associates had not known. After each list had been presented, subjects were asked if they had known any words previously. If so, the score was decreased accordingly. In the quiz list, half of the words were presented with the rare English words as stimuli and the subject had to provide the common definition;

for the other half of the list the subjects were given the common definition and the student had to provide the rare English word itself.

Procedure

Five lists of rare English words were given first to all subjects in exactly the same way per group. The first list was a control; that is, students were simply told to learn the list of twenty-five rare English words any way they could. Next, four more equivalent lists were given to the students. The four between-subject groups had the first two independent variables assigned differently for lists 2 - 5. Each group of subjects received just one of the four possible combinations of the suggestive atmosphere and early learning recall, but with imagery and dramatic presentation used consistently. After these five lists, it was assumed that students had learned how to learn utilizing these techniques. Then, after a rest break, the students were given four more lists (6 through 9) in all four possible combinations of the dramatic presentation and imagery variables.

Several ratings on a 1 - 9 scale in a pilot project previously were used with a list's presentation to check on the effectiveness of manipulating the four major factors. Prior to the presentation of a list for learning, subjects were asked to rate their learning expectancy, mental calmness and extent of remembering an early pleasant learning experience in detail. Just after the list had been presented for learning, subjects were asked to rate the dramaticness of the list presentation, their use of imagery, extent of sensory projection, and number of words known previously, if any. Analyses of variance of these check ratings were performed to determine whether the manipulation of the experimental factors had been successful, or not. In the pilot project, analysis showed that these manipulations were successful as intended. Consequently, the experimenter was considered "trained" and the use of check ratings dropped in this research proper.

Results

In the preliminary learning phase (lists 1 - 5), the only significant effect ($p < .01$) was that of sequence (See Table 1). Subjects learned more words during their respective treatment conditions on lists 2 - 5 than they did on the first (control) list. This provides evidence that the manipulated learning conditions did produce improved learning as intended.

In the techniques drop-out phase of this study, the only significant effect ($p < .01$) was the main effect of the combined variable of imagery plus sensory projection (See Table 2). When imagery and sensory projection were used, subjects learned an average of 11.9 words; when both were absent, they averaged only 6.4 words per list.

The variable of suggestive-positive atmosphere showed a trend ($p < .10$) in the expected direction. While not significant, the main effects of

early pleasant learning recall, sex of subject, and dramatic presentation plus mind calming were in the expected direction, e.g., they provided for somewhat better learning.

There were several interesting interactive trends ($p < .10$) that are not graphed, but only discussed. Early pleasant learning recall and imagery interacted such that either technique by itself resulted in better learning than neither, but somewhat poorer lea rning resulted when both were used together. Imagery and sex of subject intereacted such that male subjects benefited more than females from the use of imagery. Early pleasant learning recall, dramatic presentation, and imagery interacted in that dramatic presentation and imagery when used together resulted in best learning. The last interesting interaction was for the effects of suggestion, dramatic presentation, and sex of subject; male subjects learned more words when dramatically presented and when given suggestion than without, but female subjects learned approximately the same number of words merely given suggestion and regardless of dramatic presentation or not.

In conclusion, we offer these statements:

1. In the preliminary learning phase, the experimental treatments of imagery plus sensory projection and dramatic presentation plus mind calming produced significantly enhanced learning as intended.

2. In the drop-out phase, learning dropped to half when the variable of imagery plus sensory projection was omitted. Thus, this complex variable is critical in maintaining superior learning.

3. More research is indicated to follow-up on these pilot results and the interesting trends that occur when students have been exposed to techniques for superior learning.

Table 1

ANOV Summary for the effects of sequence, group of subjects and sex of subjects on the learning of rare English words in the preliminary phase

Source	*df*	*MS*	*F*
Between subjects			
G, Group of subjects	3	20.19	.61
X, Sex of subject	1	34.30	1.04
G x X	3	23.30	.70
Error 1	8	33.05	
Within subjects			
Q, Sequence	4	54.21	19.96**
Q x G	12	2.62	.96
Q x X	4	3.89	1.43
Q x G x X	12	4.76	1.75
Residual	32	2.72	
Total	79	13.22	

**$p < .01$

Table 2

ANOV Summary for the effects of suggestive positive atmosphere, early pleasant learning recall, sex of subject, imagery + sensory projection and dramatic presentation + mind calming on the learning of rare English words in the dropout phase

Source	*df*	*MS*	*F*
Between subjects			
S, Suggestive positive atmosphere	1	133.01	4.14'
E, Early pleasant learning recall	1	102.09	3.18
X, Sex of subject	1	78.84	2.45
S x E	1	58.59	1.82
S x X	1	12.76	.40
E x X	1	44.01	1.37
S x E x X	1	116.28	3.62'
Error 1	8	32.13	
Within subjects			
I, Imagery + sensory projection	1	325.96	35.11**
D, Dramatic presentation + mind calming	1	7.63	.82
I x D	1	12.13	1.31
I x S	1	12.69	1.37
I x E	1	35.58	3.83'
I x X	1	32.77	3.53'
I x S x E	1	1.35	.15
I x S x X	1	8.54	.92
I x E x X	1	1.00	.11
I x S x E x X	1	11.58	1.25
D x S	1	.36	.04
D x E	1	17.68	1.90
D x X	1	6.36	.69
D x S x E	1	5.21	.56
D x S x X	1	10.51	1.13
D x E x X	1	7.63	.82
D x S x E x X	1	6.36	.69
I x D x S	1	2.44	.26
I x D x E	1	26.67	2.87'
I x D x X	1	3.25	.35
I x D x S x E	1	9.01	.97
I x D x S x X	1	5.21	.56
I x D x E x X	1	.01	.00
I x D x S x E x X	1	9.01	.97
Residual	24	9.28	
Total	63	9.29	

'$p < .10$
**$p < .01$

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Evaluation of the Suggestive-Accelerative Lozanov Teaching (SALT) Method in Teaching Earth Science to Low Socioeconomic Ninth Grade Students

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Abstract

This study compared the effectiveness of a teacher trained in the SALT method in teaching earth science with a teacher using her own method in teaching earth science to low socioeconomic ninth graders. At year-end, the SALT-taught students averaged significantly better in earth science achievement and had better student-teacher affective relations, less perceived school-stress, and better attitudes towards school orientation and learning than the controls.

Introduction

The purpose of this study was to determine whether the earth science achievement and school attitudes of ninth grade students from low socioeconomic status (SES) could be accelerated relative to a control group with the SALT method, Suggestive-Accelerative Learning and Teaching. The method was developed by Lozanov (1971, 1975) and has been used successfully in his native Bulgaria for teaching many school subjects, especially foreign languages, reading and mathematics. Gritton & Bordon (1976) adapted the method successfully for eighth grade spelling. A review of the Americanization of suggestopedia and associated research is covered in Schuster et al (1976). Thus it seemed reasonable to expect that SALT would facilitate the acceleration of learning earth science in this study.

Method

The earth science teacher in this study volunteered to participate in this project in mid-summer 1976. He completed a 120 hour teacher training graduate course offered by Iowa State University during second summer session 1976. After completing the course, which included supervised SALT practice teaching, he was deemed adequately trained. He used the SALT method consequently in teaching during the school year 1976-77.

A control group was obtained through a cooperative school nearby where another teacher volunteered to provide comparison data in connection with teaching earth science her own conventional way.

An analysis of variance (ANOVA) design was used with independent variables of treatment (SALT vs. control) and testing (pre or post). The dependent variables were earth science score and three attitude scores from the Brooks Student Questionnaire (BSQ) as refined by Schuster & Millard (1978). These three independent scales are, student-

teacher affective relations, perceived school stress and school-learning orientation.

The statistical model was modified to the preferred analysis of covariance (ANACOVA) as identifiable pretest and posttest data were available for all students. Each student's posttest score was adjusted for initial differences in pretest to compensate for possible group differences at the start. Interest thus focused on the treatment main effect.

Results and Discussion

Table 1 presents the ANACOVA summary of the effects of pretest and treatment on ninth grade earth science achievement, low socioeconomic status students. Significant effects were found for pretest ($p < .01$) and for treatment ($p < .05$). The significant pretest effect reflects the well known and expected correlation between alternate forms of the same test. The SALT class posttest average adjusted for pretest of 15.83 was significantly higher on earth science achievement than the control class average of 12.68.

Table 1

ANACOVA summary of the effects of pretest and treatment on ninth grade earth science achievement, low socio-economic status students

Source	df	MS	F
Pretest	1	250.07	10.70**
Treatment	1	102.40	4.38*
Error	61	23.38	--

** $p < .01$, * $p < .05$

Treatment averages by testing

Treatment	Pretest	Posttest	Adjusted Posttest	Gain
SALT (n = 51)	12.12	15.76	15.83	3.64
Control (n = 13)	12.77	12.92	12.68	0.15

Table 2 is the ANACOVA summary for the effects of treatment, sex and pretest on ninth grade BSQ affective relations score. A significant effect ($p < .05$) was observed for pretest and for treatment ($p < .05$). The significant pretest effect reflects the well known correlation between alternate administrations of the same test. The SALT class posttest average adjusted for pretest on the BSQ affective relations score was significantly lower (better) than the control class average.

Table 2

ANACOVA summary for the effects of treatment, sex, and pretest on ninth grade BSQ affective relations score

Source	df	MS	F
Treatment	1	304.06	5.07*
Sex	1	42.65	0.71
Treatment x Sex	1	9.33	0.16
Pretest	1	415.10	6.92*
Error	51	59.99	--

* $p < .05$

Treatment averages by testing

Treatment	Pretest	Posttest	Adjusted Posttest	Gain
SALT (n = 49)	30.67	33.04	32.90	2.37
Control (n = 7)	27.86	39.14	40.13	11.28

Table 3 presents the ANACOVA summary for the effects of treatment, sex and pretest on ninth grade BSQ stress score. A significant effect ($p < .01$) was observed for pretest and for treatment ($p < .10$). The significant pretest effect reflects the expected correlation between alternate givings of the same test. The SALT class average was significantly higher on the BSQ stress score than the class average. A high BSQ stress score indicates the student feels a small amount of stress, so the SALT students felt a significantly less amount of stress than the control students.

Table 3

ANACOVA summary for the effects of treatment, sex, and pretest on ninth grade BSQ stress score

Source	df	MS	F
Treatment	1	85.13	2.84*
Sex	1	0.00	0.00
Treatment x Sex	1	9.14	0.31
Pretest	1	1364.16	45.52**
Error	51	29.97	--

* $p < .10$, ** $p < .01$

Treatment averages by testing

Treatment	Pretest	Posttest	Adjusted Posttest	Gain
SALT (n = 49)	43.92	42.49	43.03	0.57
Control (n = 7)	48.00	42.57	38.76	-5.43

Table 4 presents the ANACOVA summary for the effects of treatment, sex and pretest on ninth grade BSQ learning orientation score. Significant effect ($p < .01$) was observed for pretest and for treatment ($p < .07$). The significant pretest effect reflects the well known correlation between alternate administrations of the same test. The SALT class posttest average adjusted for pretest was significantly lower (better) on the BSQ orientation score than the control class average.

Table 4

ANACOVA summary for the effects of treatment, sex, and pretest on ninth grade BSQ orientation score

Source	df	MS	F
Treatment	1	119.83	3.38*
Sex	1	2.08	0.06
Treatment x Sex	1	0.29	0.01
Pretest	1	656.90	18.51**
Error	51	35.49	--

* $p < .07$, ** $p < .01$

Treatment averages by testing

Treatment	Pretest	Posttest	Adjusted Posttest	Gain
SALT (n = 9)	26.57	28.00	27.94	1.43
Control (n = 7)	25.71	32.14	32.56	6.43

Other variables need a few words here. The teacher had been trained in a 120 hour summer workshop and was deemed well trained by the writer at that time. The writer observed this teacher several times in his classroom during the school year. On this basis he had received a satisfactory rating, indicating he had an adequate grasp of SALT principles and classroom applications. The teacher estimated that he used SALT only one-fourth of the time in his classroom.

See the Appendix for the teacher's comments.

Summary

In testing the SALT method in a ninth grade earth science class in a low socioeconomic setting, these conclusions appear warranted:

1. The SALT class performed significantly better on the earth science achievement test than the controls.
2. On the BSQ (Brooks Student Questionnaire) scales of student-teacher affective relations, school stress and learning orientation, the SALT students had significantly better scores than did the controls.

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Appendix

Teacher's Personal Opinion of SALT

Ninth Grade Earth Science:

This is my third year of teaching and this year has been the most successful of any of my previous years. I attribute part of my improvement to experience. The largest share, however, I feel must be attributed to my SALT training.

The things that I have done well are as follows: 1) I have become much more positive in my dealings with kids; 2) I strive to keep the idea, "I am here to help you no matter who you are or what you do." Almost all the kids I deal with understand this. This is something I had a hard time conveying before; 3) I have also been able to gain more respect from kids this year. I feel this is due to my new positive personality and also to the success that has been shared over the year. This has also carried over into my athletic coaching endeavors where I was very successful this year. At the end of the school year I felt a warm, friendly feeling from the kids. This feeling was absent my first two years.

This is my first full school year with SALT and much is very experimental. I can hardly say that I have followed the SALT Manual exactly. I was unable to do or I did not care to do many of the suggestions outlined in the Manual. The school administration advised me against physical exercise. I proceeded through most of the year without it. Mind calming is very successful with some kids, but not with the ones who fight it. This is something I feel I will be better able to handle next year. Breathing in rhythm is something I cannot execute and I do not believe it is that important. I believe that the power of suggestion is more subtle than I was aware. I think I developed a good share over the year, but nowhere near my capabilities. I will keep an open mind and strive for betterment in the future. I only hope I can instill this same feeling in my students.

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Report on the School Experiment 'Suggestopaedia in Elementary School'

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Abstract

Suggestopaedia was evaluated in a Vienna public school in two first grade classes with 64 students in the subjects of reading, writing and arithmetic in 1973/74. There were no significant pretest differences between the two classes in intelligence, vocabulary, picture-test or educational-professional background of parents. One class received its instruction suggestopedically with a trained teacher and specially prepared materials. At the end of the school year, the experimental pupils had achieved the goal for first grade arithmetic, reading and writing.

The Suggestion

In teacher training we have not yet learned to bridge the gap between theory and practice. We do not yet apply our theoretical knowledge from the social sciences and didactics in the everyday process of teaching. Additionally, the physiological and psychological facts and principles of teaching and learning are not heeded. Teaching models, inadequate to the child's psyche and thought process, are applied. Exhaustion and disinterest in learning, and in some cases even neurotic symptoms, are the results after a few months.

Lozanov claims that in this situation no satisfactory didactic starting point can be found without the results of suggestive-communicative psychotherapy, because

1) only psychotherapy reveals the reserves existing within the human personality:

a) with the help of psychotherapy not only vegetative, endocrine and trophic changes can be produced, but also

b) positive changes in intellectual activity, improvement in memory and positive behavioral changes. A part of these reserves can also be mobilized in the classroom with the help of suggestopaedia.

2) Another important component of psychotherapy is the psychohygienic and psychoprophylactic influence.

In all the different schools of psychotherapy - be it psychoanalysis, logotherapy, psychodrama, autogenic training or persuasion - suggestion is included. That is suggestion through the effect of the doctor as a father-figure;

through the ritual ceremony,

through the persuasiveness and the power of persuasion etc.

If one has recognized the power of suggestion in the healing process and is sensitized to it, then one notices quickly that suggestive elements exist, more or less strongly, in every communicative process. The most important factors, apart from the intellectual content, are

the positive emotional receptiveness,

the understanding,

the recognition,

the acceptance,

the trust in the ability of the other,
the absence of negative reinforcement.

This has been often recognized by educators. Bollnow put it this way: "You can make people better if you think they are better." The English psychologist Hurlock found in her experiments with teacher behavior and learner success that the greatest success was registered in groups whose teacher emphasized the positive, and corrected negative things in a neutral manner.

A physical and mental relaxation is created in the communication between teacher and pupils by means of

the positive attitude towards the pupil,
the instruction by showing that learning is fun,
the right choice of words,
encouragement,
praise,
the subtle application of non-verbal communication (intonation),
the regular use of classical music with its subconscious effect,
the offering of artistic performances.

This relaxation is a prerequisite for quick and easy memorization of the teaching matter.

It is directly expressed on different levels that learning is a pleasant activity and accepted as such by the children. The teacher does not talk about "practicing", or "remembering" anything, and does not say things are "absolutely necessary" or "difficult".

From the very beginning the instruction becomes a conditioning for a positive attitude towards life. The children experience this through all their senses. As a result all negative emotions are avoided at the beginning of the schooling process. The children experience that learning is something pleasant and interesting. Therefore there are no homework assignments during the first semester; especially good pupils are allowed to write homework voluntarily.

Music and learning

The American scientist Ornstein has already stated in "The psychology of consciousness", as a result of complicated research work, that the left brain-half is the center of analytical thinking, the linguistic and logical processes, the linear digestion of information and order, whereas the right brain-half contains the spatial orientation, artistic abilities, the physical consciousness and the center of recognition, as well as the assimilation of diffuse information. Of course, neither of the two brain-halves works independently, and there is - so to speak - mutual information. It would be ideal if not only parts of the cortical structures were activated but the whole of the functional cortical and subcortical systems. Dr. Lozanov maintains that a possible way to achieve this, is learning with the accompaniment of music. P. Balevsky describes in detail which EEG changes occur in the process of memorization under ordinary and suggestive conditions. A number of authors have found out that there is a close parallel between the level of brain activity and memorization, and suggestion and autosuggestion are an important part of their methods. The telemetric encephalographic research carried out on people studying foreign languages by the suggestopaedic method of Dr. Lozanov showed no increase in the bioelectrical activity of the brain, in spite of the large amount of information given to the students. Balevsky's experiment was carried out to find the correlation between the level of brain activity and the level of the short-time memory under normal conditions of memorization and under conditions using the

means of suggestion, i.e. intonational presentation of the material, and the soothing effect of classical music. The results show that efficient memorization is not connected with a high level of brain activity, but on the contrary, the optimum level of brain activity is a relative quantity, subject to the conditions of the experiment and the individual characteristics of the student.

The following graph shows the changes in the average frequency of the bioelectric brain activity under normal and suggestive conditions:
(insert graph here)

Didactics do not fulfill these requirements. The instruction is directed mainly toward the cognitive but not the affective domain. In terms of brain physiology that means that the teacher addresses himself to the cortical structures, neglecting, however, the subcortical ones. Dr. Lozanov maintains that the teachers do not adapt their teaching process to the anatomical facts but instead try to teach the brain how it is supposed to learn. He calls this patho-pedagogy.

Principles and means of Suggestopaedia

Current pedagogical practice contradicts the following fundamental psychophysical facts:

1. The functional unity of the cortex, subcortex and reticular formation means that teaching should activate imaginative thinking, logical abstraction, and the set-up of the emotional - motivational complex simultaneously. Pedagogical practice, however, addresses only the cortex, neglecting emotional and motivational structures, or activates the brain system in stages rather than simultaneously.

2. Analytical and synthetic activity occurs simultaneously in the brain, not in separate stages. This is reflected in the cognitive patterns: from general to particular and back to general. Pedagogical practice distorts this pattern by studying and making automatic particular elements which are later connected into a whole, or by studying the whole without regard for its constituent parts. No such division of the simultaneous analytic-synthetic process is possible.

3. A person learns on many levels, conscious and unconscious. Suggestopaedia utilizes the entire conscious-unconscious complex and agrees with the psychophysical facts of the learning process. The underlying theory is that of the unconscious foundation of long-term memory, automation, intellectual activation and global stimulation of the personality.

The suggestopaedic system of teaching is based on the simultaneous observation of the following three principles:

1. Principle of joy and lack of strain, i.e. pleasure and inner motivation allows the concentration without the anxious tensions which come from lack of confidence in one's ability to understand, memorize and utilize the material.

2. Principle of unity of conscious and unconscious, according to the psychophysical facts mentioned above.

3. Principle of the suggestive link, which requires instruction that produces close interpersonal relations similar to those existing in group psychotherapy, and also requires the coordination of the desuggestive-suggestive factors. This allows the person's reserves to be tapped, the results of which indicate the realization of this principle.

These principles are realized through psychological, didactic and artistic means, which again form a unit. The psychological means are utilized in the fringe perceptions and the emotional motivation; the didactic means demand the enlargement of the teaching units, which fa-

cilitate an overall view of the teaching material. The artistic means of suggestopaedia introduce a special type of stimulating didactic arts, (music, literature etc.) into the teaching process. They are not a special stage of illustration but contain the teaching material itself.

Demands on the Experimental Teachers

1. Informing the teachers about the suggestopaedic teaching system.

The historical development of suggestopaedia is the point of departure for informing the teachers. They are instructed through films about the use of suggestopaedia in surgery (performing operations without anesthsia), in psychotherapeutic treatment of neuroses by means of language instruction and finally in foreign language teaching with adults and children.

They are instructed about the concept of suggestion - as I have just mentioned - and the principles of suggestive-pedagogic methods. Obviously the teachers must become familiar with the basic psychotherapeutic principles of suggestopaedia. Only with this knowledge can they realize that it is often necessary to forget about the rules of contemporary didactics - or the assumptions which have practically come to be considered as rules - and to shape the instructional process in a way which contradicts the traditional didactic principles. The teachers should learn to overcome their own inner conflicts between the old practices and the new requirements and to fulfill the new requirements. As soon as they have gathered enough experience in the application of suggestopaedia, they will have difficulties returning to the conventional methods.

2. Familiarization and preparation of the teacher for the use of music in the teaching process.

For nine years physiologic research has been under way to determine the best pedagogic effects of the method. Direct investigations have shown that a rise in the bioelectric activity takes place in the learning process. At a very high level of excitability, however, as well as at a very reduced level, only a part of the information can be absorbed. With the use of classical music and a three-phase intonation the bioelectric activity is only slightly elevated, the ability to memorize, however, is much increased. The method integrates the elements of individual and group-therapy. All forms of non-verbal communication are applied i.e. three-phase intonation (normal speech which arouses expectation, whispering and stressing rhythmically), language, mimics, gestures and posture of the teacher are to transmit continuous non-verbal positive attitudes. It is not so important for the student to be able to spell a certain word, but rather to assimilate the images and emotions behind a semantic unit.

The teachers must be taught that in the conventional teaching process very often only parts of the cortex are activated. If one succeeds in activating the entire functional cortical and subcortical systems, the achievements can be multiplied. Therefore the teacher should apply the tape-recordings while introducing difficult and new teaching matter. Of course, every disturbance by extraneous noise is to be avoided.

3. The use of puppets, theater, films, video-tapes of plays and children's operas.

When a new teaching matter is introduced for the first time (e.g. addition and substraction from 1 to 10, or the introduction of numbers beyond 10), a puppet play, a theater performance, a dance or a children's opera, or a film or video-tape should be the starting point. These didactic performances, which Prof. Lozanov refers to as 'spectacles', should be discussed the following day and then be used in the teaching process as

additional impulse.

The preparation and selection of the actors and singers is of great importance. In Austria such spectacles were originally considered unimportant, but later the value of these plays was recognized. We have shown children's operas from Bulgarian television. Of course, certain parts had to be deleted for ideological reasons. These presentations were surprisingly successful.

4. Designing of musical-didactic theater-performances.

Because the material available from Bulgaria does not always meet our requirements and not all topics are covered, and because this material should correspond to the mentality of the children, it is necessary to use the teachers to design original plays, and with the help of experts, to produce the plays or to have them produced.

5. Creation of appropriate teaching materials.

Suggestopaedia demands many more teaching materials than is customary. Of course, a portion of the teaching material and books now in use can also be applied. It is not, however, possible to get by with these alone. It has proven necessary in Austria to design a number of new books as well as to purchase other already available teaching materials. Most of the available primers do not correspond to suggestopaedic principles and therefore, with the help of Dr. Lozanov, we have written our own primer.

6. Production of teaching material.

It has proven necessary to produce a series of visual materials in addition to those already available. For the teaching of reading a number of large and colorful pictures (about 75 by 100 cm) were produced. These show things from the child's world: e.g. hunter, bear, hedgehog, frog, clock, table, ear. Below the pictures the names of the animals or objects are printed. In some cases the picture is described with a sentence, such as "The monkey is eating ice-cream" or "The cat is chasing the mouse". For the arithmetic instruction appropriate number boards were prepared.

7. Changes in the teaching matter.

No curricular changes have been made in the present experimental stage, but the normal teaching matter of the first, second and part of the third grade is already taught in the first grade. The teaching units are combined according to their meaning and content.

In reading the pupils begin immediately to read single words, or short affective sentences, such as the previous examples: "The monkey is eating ice-cream" etc.

8. The teacher as positive motivator.

All of this should produce a positive atmosphere, in which the instruction takes place. The child should feel that learning is easy and pleasant. Of course, the teacher will exhibit behavioral patterns which help the child integrate into society; he will be tolerant and will bring about changes in behavior with constructive measures.

9. Teaching principles carried over from traditional pedagogy.

Although the instruction process must be reconsidered and revised according to suggestopaedic principles, many of the traditional instructional principles can be carried over, e.g.:

closeness to life,
concreteness,
appropriateness to the child's age,
learning by doing,
principle of assessment,
integrated overall view.

Information of the Parents

The parents are an important factor in the entire teaching, learning and educational process. They must be familiar with the principles of suggestopaedia, have an active interest in school-activities and above all they must help provide positive motivation. The children have no homework assignments during the first semester because they have to deal with many problems in the beginning and very often homework is too tiring for them. The parents very often demand homework that is too perfect from the children. On the other hand a positive attitude towards homework is desirabie. Therefore homework is used as a reward: "Because you were especially good today, you may do some homework".

In order to give the parents a picture of their children's activities and to integrate them into school activities, they should take part in the teaching about every week or fortnight. Our parents come regularly to discussions with the teacher. They gladly integrate the material from the school day into the activities of the family, e.g. they stimulate the child to read, send him on small shopping errands or ask him to write letters, etc.

One of the results of this cooperation between parents, pupils and the teacher is a wall-hanging, which they produced together as a Christmas decoration. This shared experience fostered a spirit of community.

Selection of the Teachers

It is advisable to take only teachers who are interested in new methods and have already proven their abilities in school experiments. In addition to this, the teachers should be highly qualified and not be too overly bound to traditional ideas in their pedagogic views. Authoritarian personalities, who use pressure instead of positive motivation, who produce fear instead of pleasure in learning, who are convinced of the perfection of their own teaching style, and who only want to try something new in order to prove to themselves and the world that their method is best, are not suited for suggestopaedia.

The School Experiment

In 1973 I was confronted with the surprisingly good results of foreign language teaching in Moscow. I was, however, unable to learn anything then about the method. I was only told that a Bulgarian scientist had developed the new teaching techniques. Six months later I was called to the Department of Education and told that a new teaching method for elememtary school had been seen during a state visit to Bulgaria. If the parents and teachers were interested in an experiment, we could begin as soon as the fall of 1974. And that is how I met Dr. Lozanov.

He soon handed in the proposal for the experiment (see Appendix). The Educational Department agreed to the proposal and the Ludwig-Boltzmann-Institute agreed to pay the expenses of the Bulgarian experts and to provide the additional teaching materials.

Organizational Preparations

Presentation of the model.

The model was presented to the three teachers who were to teach the three first grades the following year. Two teachers agreed to take

part in the experiment.

The parents were allowed to decide whether their children would be placed in a normal class or in a suggestopaedic class. After a discussion with the two teachers, the school director and Dr. Lozanov, more than sixty parents chose to have their children participate in the school experiment.

Dr. Lozanov and the teachers together selected the textbooks and the additional reading material for the first two grades; the necessary audio-visual media were provided for. The pictures for the suggestopaedic reading instruction were made in Bulgaria. An adequate primer could not be produced for the first year. The teachers themselves prepared many worksheets and wrote short reading books for the beginning.

Training of the Teachers

In June, before the beginning of the first year of the experiment, the teachers received an outline of the experiment, all of the material about suggestopaedia available in German, plus the book "Suggestopaedia".

The tests were given on the second and third day of school. The pupils of the A class had attended an intensive preschool, while the B and C classes were complete beginners. Each class contained exactly 32 pupils, about half of them boys. A comparison of the average test results showed significantly better achievement (at the 1% level) of the pupils of the A class in the matrices test, vocabulary test, and picture test. The professional distribution of the parents also showed higher professional qualifications for the A class.

In addition, Dr. Lozanov recorded speech examples by all of the children. In the A class five children could already read and write, while in the B and C classes only two or three could. Teachers and parents of the children in the A and B classes had chosen to participate in the experiment. These two groups were the experimental groups, while the C class was the control group.

Reading instruction

1. On the third day pictures are hung in each class as "decoration". Below each picture the appropriate word or sentence has been printed.

1st series: Hunter, bear, Christmas tree, quince, dolphin, sun, monkey, donkey, nut, stockings, ear, hedgehog, frog, clock, table, train.

2nd series: Snowman, ice-cream, rose, mouse, jug, sugar, lion, scales, doll, fire, house, spider, nut, fork. The cat is chasing the mouse. The monkey is eating ice-cream. The donkey is carrying a table.

The pictures remain in the classroom for two days but the attention of the children is not directed to them.

2. At the end of the second day the pictures are removed and shown to the pupils in a different order. In this procedure the pictures are covered. The children try to read the words first in chorus, then individually. Then worksheets are completed, on which the pupils have to solve the following problems:

a) Which picture was visible above the word or sentence?
b) Which word or sentence belongs with this picture?
c) What is the word? What is the sentence?

3. The second series of pictures is hung in the classroom for two days. The procedure is repeated.

4. The words and sentences from the pictures are shown with the overhead projector in various orders and used as a quick-reading drill. The children read first in chorus, then individually. The children especially enjoyed the way in which the teacher showed the pictures at random.

5. The newly learned words and sentences are combined with new words into new sentences.

The cat is chasing the mouse.

The dog is chasing the cat.

The dog is chasing the mouse.

The children read altogether first, then individually. They are not allowed to read individual letters or syllables. They are always asked to read the word or the sentence. Independently of this the teacher explains that the words consist of letters.

6. Didactic plays and operas: A part of the newly learned words and many new words are used in the solving of interesting problems in a play. Pupils and teacher take part in the action and help the performers. The children should find that reading is pleasant and easy. The material for the arithmetic lesson is included in the same play.

7. Short poems and prose passages, consisting mostly of familiar words and constructive contents, are read in groups and individually. The children must follow the words with the index finger, even if the word is unfamiliar to them. The slide projector is also used. This stage is reached after about ten days.

8. Reading of new short sentences (fables and fairy-tales), consisting mostly of familiar words, but also including two or three unfamiliar words each. Chorus reading and individual reading, work with the slide projector and quick-reading competitions are also used.

9. Reading of short books, appropriate to the level and knowledge of the children is done. Not only familiar words but also new ones should appear.

They are read in chorus, the teacher reads along aloud, but stops, however, from time to time and allows the children to continue reading alone. During this process she changes volume, reading more loudly when she notices that the children need help. The texts have to be short, emotional and rhythmic. The reading speed is steadily increased. The goal is that the children learn to read quickly, combining small and large words and avoiding the reading of syllables. At times chosen reading in chorus is changed to individual reading. Each text will be read a maximum of two times, in order to avoid memorization.

After reading the initial series of easy texts at the children's own level, more advanced short books, which can be purchased commercially, are read. The aim is to read as many books as possible. One should not spend too much time on one book but rather go on quickly to the next one. Prerequisites are created for varied repetition with the addition of more and more new vocabulary. The pupils who have made more progress, can read more difficult short books silently and individually and retell the contents to the other pupils at the end of the lesson. At the same time the class continues reading new books in groups. A transition to more expressive and artistic reading is made in steps.

Dr. Lozanov gives the following *explanations* for this procedure: This reading method seems to be similar to the whole-word-method, but this is only a phenomenological similiarity. There are a number of important differences between these two methods.

First of all the suggestopaedic system of reading instruction differs from the whole-word-method with regard to the uniformity of the three principles in the teaching process.

1. In suggestopaedia the combination of the material in words and short sentences is in accordance with the psychologic and artistic means.

2. The word or sentence is absorbed to a great extent peripherally, emotionally and without effort. The content of the lessons is presented to the children through the pictures which are used for the decoration of the rooms.

3. The children are not kept long in sentences in which only individual words have been changed. They go on quickly to new texts and short books.

4. The pupils learn the word as a unit. In the beginning they are simply informed that the word consists of letters. The initial letters are shown in the pictures as an element of the pictures. The optical and aural analysis is of minor importance but of great importance in connection with the sensual stimulus.

5. The synchronic group reading with its melody, rhythm, accelerating tempo, the participation of the children and the teacher's variation of volume has a suggestive character and adds to the naturalness of the method.

In summary, the suggestopaedic method in reading is a natural method. It imitates the repetition process of small children in a number of its principles. The results achieved with this teaching process are a multiple acceleration in comparison with other methods.

Writing instruction in the 1st grade

The instruction in writing is also based on the three principles. The opera performances also comprise difficult material for the writing instruction. A writing lesson may be organized in the following way:

1. The teacher writes a short, emotionally loaded sentence on the blackboard.

2. The teacher quickly analyzes the content of the sentence and its structure - words, letters, capital letters (initial letters).

3. The pupils copy the entire sentence in their note books.

4. The teacher checks the pupils' independent work, he marks the mistakes and asks them to write the incorrectly written words and letters again.

5. The pupils copy the sentences.

6. The pupils write the entire sentence once more as a dictation.

7. The pupils write similar sentences with many identical words in the form of a dictation.

8. A slow transition is made to difficult texts and dictations.

Please note: The writing lessons must not be boring. The children should copy interesting texts and appropriate background music should be provided.

The instruction process in arithmetic for 1st grade pupils

Closeness to life and the connection with other school subjects is of special importance in arithmetic instruction for 1st grade pupils. Parts of the arithmetic to be learned can be brought into the painting and drawing lessons for example. From this the children feel that a knowledge of arithmetic is important and at the same time interesting. Such connections can also be made in physical education and all of the other subjects. In physical education, e.g. the children can count, add and subtract in the form of a game etc. Connection with other subjects must always be made in an enthusiastic and unnoticable way so that the children do not realize that they are doing exercises. The arithmetic material includes everything that is planned in the official teaching program for the 1st, 2nd and part of the 3rd grades. Everything is functionally grouped according to six themes. Each theme is taught in the four following stages.

In the *1st stage*, the operas, operettas or plays should help present the essent ials of the new theme to the children. The performances are prepared by the actors of the suggestopaedic-didactic theater. Essential teaching matter is transferred to the pupils without their noticing that they are learning, by means of fairy-tales and fables which are interest-

ing for the children. The examples must be introduced in the emotionally exciting moments and appear to be a part of the solution of the problem. In the course of the play the 'pupil-spectators' must gradually be drawn into the action of the play. They can become actors without noticing and even develop creative initiatives for the development of parts of the performance. Also at this stage pictures with the most essential problems are hung in the classroom as each new theme is begun. These problems can partly be solved by analogy. The teacher must in no way draw the pupils' attention to these pictures, they are only there as decoration. It has been proven that such material is absorbed more deeply and without waste of energy and time.

In the *2nd stage* on the following day the children should retell, or even re-perform what they have seen. In this the didactic problem must not be forgotten, which is the decisive factor within the performance. Songs, rhymes, and poems should be learned to support the learning process.

In the *3rd stage* (again on the following day) the theme is treated generally within two lessons. One always proceeds from the performances, the didactic songs and poems. Afterwards one can continue with the didactic game. All of the different materials are directed toward teaching the children one and the same functional principle. It is explained to the children how to add 6 + 7, which is the same as 16 + 7 and 136 + 7 etc.

In the *4th stage* (in the following days, one lesson each), reinforcement of the materials taught, deepening of the knowledge, solving of creative problems. Short systematic checks are made in order to find out how well the material has been absorbed and what individual help the pupils need.

As soon as these checks show that the pupils have learned an average of 70 to 75% of the material, one can go on to the next theme. Experience shows that the entire material can be taught within 60 lessons. The period of time may be shortened or lengthened in some cases.

It is of great importance that the teachers always show the pupils by their own behavior that the material is very easy to learn. The instruction should proceed in a cheerful and happy atmosphere. The pupils have to know about their progress. No homework assignments are given during the first semester because that would mean that there are great difficulties in learning and also because the parents are often inclined to demand too much of the children. If a child wants to solve problems at home on his own initiative and then show the results to the teacher, this is to be encouraged. The teacher must not insist that the pupils do homework every day, unless they themselves desire to do so.

During the first year the progress into the teaching matter must be unnoticed and pleasant. To this end the parents should be instructed to send their children shopping and to require an exact accounting from them. In general, the school knowledge of the children should be introduced into their daily lives. This must not, however, remind them of any sort of test. The children are positively motivated by practical success.

Mistakes made by the children must be corrected very carefuly and circumspectly and sometimes even overlooked. Attention should be directed to the correct solutions, which are to be stressed and emphasized.

The children should be periodically taken to visit institutions of interest to them, such as museums, exhibitions etc. In this way they can learn how important and interesting it is to learn arithmetic. Such excursions should be organized already at the beginning of the school year in order to create positive motivation.

The exercises to be solved must be related to the different topics. The texts must always contain interesting situations which appeal to the child's psyche, so that the child is genuinely interested in solving the exercise. E.g. if many pupils are interested in football, one will compute with actual results of recent games. This makes the lesson close to life and attracts the interest of the fans of the different teams. All exercises should be constructed on this pattern.

1. Integration of the media in the suggestopaedic arithmetic instruction in the 1st grade.

The psychological, theatrical and didactic accent of the suggestopaedic media must always form a unity. It is wrong to direct the attention at one time only to the didactic and at another time only to the theatrical and at another time only to the psychological media. All the suggestopaedic media are applied together by the teacher in any given situation.

At the 1st stage the pleasure in the presentation can be over-emphasized so that the didactic material becomes only a formal duty and this stage can become a purpose in itself, in which its important function in support of the assimilation of the new materials is lost. In the same way, if the strict teaching process in the 3rd stage is over-emphasized, the effect of the theatrical media is lost and the teaching process resumes its traditional character.

2. Integration of the different stages in the suggestopaedic arithmetic instruction in the 1st grade.

Basically, the four stages of instruction should progress from each other. Elements from one stage must also be contained in the following stage in a somewhat reduced form. E.g. in the third stage important elements from the 1st and 2nd stages must reappear and at the same time an opportunity for a transition to the 4th stage must be created. The teacher must begin with the fairy-tale, the play or the song, and continue to the didactic material. During this process he must return repeatedly to the fairy-tale, art and emotion. These elememts should not be lacking in the 4th stage either, although a tendency frequently exists to make these into dry repetition and reinforcement of the content material.

3. Integration of the themes of the suggestopaedic arithmetic instruction in the 1st grade.

The individual themes must not be connected to another only for the sake of transition. Each theme is shown to contain the themes that have been treated already, and the fundamentals for a transition to the following theme. Set theory, e.g., must not be treated only in the first theme. It can be illustrated and deepened by a variety of examples in the next theme. Geometry can also be introduced unnoticed by easy to understand illustration into the first theme. While learning the numbers (2nd theme), a natural connection to addition and subtraction (3rd theme) can be created. Addition must be at the same time connected to multiplication.

Addition and subtraction, as well as multiplication and division must always be seen as a check of one computation with another. In this way every moment of the arithmetic lesson illustrates all previous moments and creates the basis for all which follow.

4. Integration of the subjects in the suggestopaedic arithmetic instruction in the 1st grade.

The integration must also extend to the other subjects, such as reading, writing, handicraft, drawing, physical education, gymnastics and singing. The teacher's maturity and experience shows itself in the integration of the subjects. In this way suggestopaedia in the arithmetic instruction becomes a truely global teaching system.

All of this must create pleasure in learning, because a number of

depressing mental influences are overcome and the most important need of a personality is satisfied - the insatiable desire for information.

The suggestopaedic instruction took place in the subjects reading, writing and arithmetic. During the first semester all the lessons - with the exception of music and physical education - were accompanied by classical music (Mozart, Beethoven, Bach, Handel, Chopin). The children were not supposed to pay attention to the music and in fact they soon became accustomed to the music and often could not say whether music had been played or not. During the second semester the tapes were used only during the presentation of new teaching matter and during individual silent work, e.g. reading.

Before Dr. Lozanov's departure to Sofia the procedure for the following three weeks was discussed in the presence of the director of the training school and the headmaster. The two teachers received written instructions.

Because of the positive motivation the pupils were able to complete a relatively large amount of material. This greatly surprised the parents. Comparison of the children receiving suggestopaedic instruction with those receiving conventional instruction showed the superiority of the new method. The parents' praise was an additional positive motivation, which caused the pupils to work even harder.

After these general remarks we would like to come back to the report itself:

Reading: The teachers of the A and B group constructed and reproduced reading booklets for the children, because no suitable texts were available in German. By the beginning of November it was possible to begin reading from books. According to the instructions by Dr. Lozanov, the class first read out loud with the teacher and followed along by pointing to the word being read. Then individual children read alone, and attempted to retell what they had read. The letters were not treated separately. By October some children were able to read totally new words, and ⅔ of the class had reached this stage by Christmas. Two children required until February. Comprehension was very good from the beginning.

Writing: They began to write sentences in lined notebooks without any previous exercises during the second week of school. The sentences were chosen so that all letters of the alphabet appeared in them within two weeks. Each sentence was written on the blackboard by the teacher and then each sentence was written again with twice the normal distance between letters and words. The letters were named and the children then read the individual words and the sentence as the teacher called on them.

Next the blackboard was erased, the sentence written once more and copied by the children in their notebooks. Difficult words were practiced separately and finally the teacher dictated the sentence to the children.

After some difficulties at the beginning good results were achieved so that cursive writing could be mastered between Christmas and Easter.

Arithmetic: Writing of the numbers up to 10, counting, addition and subtraction up to 10 were begun in the second week of school. Set theory, which is included in the official curriculum, was not treated. The numerical range could be expanded up to 1000 in October. A short introduction of multiplication and division was also given and the first simple equations in such forms as $8/4 = x - 3$ were included. Examples with carrying and borrowing appeared after Christmas. In April the learning of the multiplication table was begun. Division and measuring were practiced at the same time.

Dr. Lozanov placed great importance on the mechanization of those

processes and the demonstration of analogies. Poorer pupils had great difficulties, because visual aids were discarded at a very early stage. Later such children were allowed to use a number board. The children used the first grade arithmetic book until March and then received the second grade book. They used the books only as extra material and would probably have benefitted greatly from the second grade book if it had been available to them already in December. By the end of the school year the better pupils were working with four-digit numbers, and the weaker ones with three-digit numbers. These pupils used visual aids in more difficult assignments. The children were very interested and cooperative, and no harmful effects from overwork could be noticed. A different time plan for the arithmetic instruction should be considered, because of the difficulties which the poorer pupils had as a result of the fast pace in this subject.

The grades at the end of the first grade correspond to the high achievement standard. According to the Austrian grading system 1 to 5 the following results were achieved:

Subject	1	2	3	4	5	total
Reading	15	11	6	0	0	32
Writing	15	14	3	0	0	32
Arithmetic	7	13	12	0	0	32

At Dr. Lozanov's request a commission of three officials from the Education Department inspected the classes and came to the following conclusions:

Report on the Final Discussion for the Assessment of the Experiment in Suggestopaedia in a First Grade of the Practice School

I. It is the goal of the school-experiment to achieve the instructional aim of the 1st grade in the areas of reading, writing and arithmetic in a shorter period of time; in particular, new working methods for pupils and behavioral patterns of the teachers are to be tested.
The general outline of the procedures was the following:

During the 1st semester all work was done at school, in the 2nd semester homework assignments were given five times a week (appr. 30 minutes each). In addition to that, new content material was tried to improve motivation.

Special elements for relaxation were

1) Transmission of new content material by means of puppets and plays,

2) Instruction of the teacher,

3) Presentation of classical music during difficult procedures,

4) Indirect presentation of visual material, which was later cognitively presented to the children by games,

5) Expansion of teaching and learning matter based on psychophysical factors,

6) Motivation through closer contact with parents.

II. Report of the experiences of the teacher in charge of the class

Because of organizational factors, puppets and plays could not be utilized to the planned extent. The special position of the experimental class within the school community must be considered as another motivational element in addition to those cited in previous parts.

It was not easy to make clear to the parents that homework assignments were not necessary in the 1st semester. The teacher was given guidelines for the teaching matter to be presented, and for the teaching methods. The wider range of material in reading and arithmetic had positive effects on the children.

III. Result of the experiment after 10 months

1) *Arithmetic*: The teaching goal of the first grade was certainly reached, and 2nd and 3rd grade materials were also taught successfully. The parents concerned are in complete agreement with the achievements.

2) *Reading*: It was the goal of the experiment to bring the children to a high reading ability and comprehension. For that purpose they were offered more reading material than the other 1st grades. By November many children could already read well. The teaching goal in reading for the 1st grade was already reached by the end of the 1st semester.

3) *Writing*: In this subject the teaching goal of the 1st grade was reached, and a large part of the achievement goals of the 2nd grade as well.

4) In the remaining subjects not included in the experiment the teaching goal was reached.

IV. Parents' opinions

A total of three discussions with Dr. Lozanov, the parents, the teacher, the department head and the principal were held during the 1974/75 school year. Periodic discussions between the teacher and the parents also took place. No negative opinions were expressed by the parents.

V. Summary

Teachers, parents, supervisors and scientific observers (Dr. Hodl, Dr. Hulesch, OSTR. Wilhelm) are satisfied with the results achieved and recommend the continuation of the experiment. The procedures listed at the beginning will be continued in the 2nd grade. A final evaluation can only be made at the end of the experiment.

VI. Planning for 1975/76

More visual aids, inclusion of an amateur theater-group, improvement of the reading units, inclusion of further elements of language, arts, and general education.

Vienna, June 19th, 1975

Signed by: Spreitzer, Rieder, Brosch, Lozanov

Results of the School Experiment

The school experiment was carried through in two first grade classes during the 1974/75 school year. Suggestopaedia was only applied in the subjects reading, writing and arithmetic.

The pupils of the A class had attended an intensive preschool class in the school year 1973/74. They showed significantly better pretest results in the intelligence-, vocabulary- an d picture-test, as well as concerning the professional qualifications of their parents, than the B and C pupils. The suggestopaedic instruction was discontinued in the A group in February because of differences between Dr. Lozanov and the teacher concerning the teaching methods. At that point the school achievements of the B pupils were already better than those of the A.

By the end of the school year the B pupils had not only reached the teaching aim of the first grade in *arithmetic*, but had also learned some materials belonging to the second and third grade goals. The teaching aim in *reading* had already been reached by the end of the first semester.

In *writing* the teaching aim of the first grade was fulfilled and the greater part of the second grade material was mastered.

In the remaining subjects, which were not included in the experiment, the teaching goal was reached.

Teachers, parents and scientists were satisfied with the results achieved and recommended the continuation of the experiment. The average grades in arithmetic were 2.16, in reading 1.72 and in writing 1.63. No 4's and 5's were given and no children were released from school. In Austria children who are not judged mature enough to complete the first grade are released from school and begin again the following year.

In the final tests the psychologists found the children's calmness and balance remarkable. No nervous disturbances were noticed.

The beginning of the second grade (school year 75/76) was a review and then simply improvised for the rest of the year. Third grade work was mastered.

After the completion of the cultural agreement, plans were made to continue the experiment this year. The teacher of the second grade reported that this plan was welcomed enthusiastically by the pupils and with satisfaction among the parents.

During the summer holidays Dr. Lozanov and Dr. Messerer planned the third grade. We have been able to carry out this plan and the goals of the fourth grade will certainly be reached this year. Because of differences in the material offered, it is not possible to compare the achievements of the experimental pupils with a control class. Their achievements in the third grade might possibly be compared with those of a normal fourth grade.

One of this year's first grades is also being taught according to the suggestopaedic method. This time the pupils of the experimental class are generally superior to those of the control classes. The following achievements could be reached by mid-March:

Arithmetic: The children compute very well with numbers up to 1000 with no carrying. They carry and borrow up to 20 and understand the analogical relationships up to 100. They are familiar with numbers up to 1000 and have no difficulties with greater than - less than relations (including the symbols). Multiplication is confined to numbers up to 10, including mutiples of 10. The achievements in arithmetic are homogeneous, with the exception of a small remedial group. The pupils work quickly and independently.

Reading: In the beginning the fastest and most surprising progress

was made in this area. In the meantime the disparities have become rather great. A relatively large top-group (about a third of the children) read fluently. The remedial group, however, has various difficulties (consonantal clusters, diphthongs, compound words etc.). The children enjoy reading, but are not really different from other classes in this respect. The most positive result appears to be an inclination to read independently.

Writing: The first script to be taught was cursive. By the end of the first semester the children could rewrite printed texts in cursive script. The unusually fast writing speed is remarkable. A systematic spelling course has been followed since the beginning of March.

The teacher's interim report says that in contrast to the fears of some colleagues the subjects not covered by the experiment do not suffer. "In summary I can say that the experiment is extremely interesting. I am quite satisfied with the results up to now; the Bulgarian results are, however, significantly better. It would be very desirable to get more exact information about their techniques. Some areas, in which we have been feeling our way, might be covered more effectively." (Ingeborg Lustig, Jahresbericht 1976).

Summing up the results of 2 ½ years of the experiment, we can say:

1) It has been possible to master a considerably larger amount of material with the help of suggestopaedia. The achievements are both quantitatively and qualitatively better. We are on the lookout for any symptoms of overwork (exhaustion, lack of concentration, neurotic symptoms such as thumb-sucking) and we reduce the tempo as soon as we notice any of these.

2) School, instruction and learning have a positive connotation. This is an obvious advantage of the experiment.

3) The results of 2) are a genuine relationship of trust between pupils and teachers.

4) The acquisition of knowledge takes place in a playful atmosphere and motivates the children to find work more and more pleasurable. The children go about their work with snooping curiosity.

5) The children become continuously more creative.

6) Aggression, which can be observed in comparable classes, appears much less frequently and in a much reduced form (psychohygienic effect).

7) The wide range of material offered means that the pupils who learn more quickly are always occupied and not restrained by the usual repetition of the same material.

8) The pupils are stimulated to experiment by the intensive material offered to all their senses.

9) Dictation, checking results and reading to the class confirm the achievements and spur on to more intensive work.

10) Because of high reading ability and comprehension the book becomes a scource of information already in the first grade (the children look things up).

11) One class is now in the third year of the experiment. So far there have been no pupils who repeated a year or were released. The usual rate of repetitions and releases is 8% in Austria.

12) The school success and the opportunity to observe in the classroom make the parents interested in the school and adds indirectly to the motivation of the children.

These advantages must be considered against the following disadvantages:

1) In Austria the suggestopaedic method is still in the experimental

stage. Thus the teacher trades the certainty and comfort of working with the existing aids (books etc.) for improvisation, pioneering and enormous effort. He must not only learn the method itself and then adapt it, but also

2) must produce the teaching and learning aids (e.g. worksheets, etc.) himself.

3) A much larger variation of achievement exists because each pupil works at his own capability. Therefore the teacher must individualize instruction.

4) The poorer pupils get no additional practice through homework. This necessitates more intensive contact with the parents.

5) The teacher has to mobilize his last reserves in order to do justice to the experiment. (This includes preparation of the puppet plays, use of video-tapes, tapes etc.)

The open question remains whether this quickly acquired knowledge will be retained over long periods or will soon be forgotten. The answer to this question will only appear after several years.

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APPENDIX

In his proposal Dr. Lozanov requested permission for a suggestopaedic experiment in two 1st grade classes, beginning with the 1974/75 school year. The aim of the experiment is to reach the teaching goal of the 1st grade in a shorter period of time in the fields of reading, writing and arithmetic. The following measures are to be taken:

1) Reorganization of the present curriculum

2) Alteration of the educational materials to correspond to the proposed plan

3) Deletion of homework assigments in the usual sense

4) Additional use of theater, indeed twice a month

5) Use of the teaching material provided by himself

6) Continuing discussions between classroom teachers and director of the experiment

7) Provision of the material requested.

For the assessment of the experiment an initial psychological test at the beginning of the school year and a follow-up test at the end of the year are necessary. The experiment will be discontinued should any circumstances arise after the first semester, which cause the teachers or the director to judge sufficient for stopping the experiment. The Department of Education has to provide for the duplication of material, telephone costs and working space, and the tests.

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What Makes it Work[1]

Win Wenger

Susan Wenger

Answer-In Service

Abstract

This paper presents principles and techniques that have been shown in practice at numerous workshops to be effective in developing new skills, learning in school, problem-solving and controlling one's autonomic processes. The bases for doing these are description, relaxation, breathing, visualization, energy and first-hand testing.

What you describe, you become more aware of. If you describe the floor under your feet, you become more and more aware of more and more details about that floor as you describe that floor.

Writers tend to be sensitively aware people. Not that they are writers *because* they are sensitively aware people: They are sensitively aware people *because* they are writers, describing people and ideas and things of experience.

The less that we have been accustomed to describing some sector of our experience, the greater will be the gains in our awareness from the act of describing it. This comes from the economic principle, that to increase the scarcest input disproportionately expands output.

In Western culture we are so unused to describing our internal impressions, imagery and other forms of internal-intuitive-pattern-recognizing experience, that nearly all of this experience is subliminal, unnoticed. Yet this sector of experience is the sector from which nearly all our ideas, creativity, solutions to problems, insights about things, and insights about ourselves, must arise.

This paper provides you with techniques for getting in contact with your own inner insights. This provides you with ways to become more definitely, clearly aware of your own inner impressions and streams of imagery which *all* of us experience in fact, but which few of us are even aware of. *As* you become aware of an image or impression, this book shows you easy ways to tell these aloud, describing them - and so opening enough further awareness to bring to light the profound insights to which that first image or impression relates.

This paper tells you how to develop your skills and awarenesses, create, invent, learn new subjects with great ease and rapidity, problem-solve, gain control of your unconscious physiological processes, heal

[1] Revised from chapter one of the book manuscript *Psychegenics* by the same author. / Further material will be found in the book *Psychegenics*.

yourself and other people, and to experience many other special benefits.

You can learn this paper's processes alone, without props; you can learn alone but with the aid of a tape recorder; you can co-learn with a live partner; you can co-learn with a group - all these diverse possibilities from this one paper. This paper will provide you specific instructions for learning and growing in each of those four modes. *Combinations* of those modes are even better than any are separately.

When working alone, you may wish to learn 1-2 new processes per day and practice each day one or another previously learned exercise.

When working with one partner, you may wish to tackle 2-3 new processes in a session, and practice one which is already familiar - or you may want to saturate your way through the whole book in two intensely rewarding weekends.

The best single mode for learning these processes is to co-learn with a succession of partners in a group. This paper is set up, however, in such a way that you can learn its processes fairly easily even if you are working alone without props. One help to working alone, without even a tape recorder, is our use of acronyms: First initial letters for each step of a process, as a memory-helping device which reminds you of the next step to do without your having to come out of introspection to check back in the paper while you are doing the exercise. (For example, "ess-ess R-BATC" -- SS-R-BATC -- is the memory aid for seven steps in a simple relaxation exercise at the start of the next section and you will see how easily the SS-R-BATC steps enable you to reach a profound state of relaxation, clearing the way for easier access to your wealth of inner insights.)

However excellent your gains from working this paper's processes alone, those gains will be dramatically enhanced if you can pull in a friend or even a small group of people to share these experiences with, to co-learn and/or co-practice with you.

Combinations are best. If possible, do some of this paper's processes in all four modes - alone without props; alone with a tape recorder; with a partner; and with a group.

The principle of description as a way to increase awareness, the point with which we opened this paper, is one of the basic principles of Psychegenics and what makes these processes work so readily. In effect, to open up your awareness of your own insights, the processes of this paper do two things:

1) Help you set up an initial impression or image, in relation to the goal or problem you want to work on, so that you have *something* to *begin describing*.

2) Guide you in *strategies of describing* which bring your awareness through and beyond that initial image or experience to the sought-after insight.

What you describe, you become more aware of. So simple- but so true.... and so untapped as a learning tool and as a self-developmental tool, until now!

To most increase your awareness, therefore, and to get freer access

to your ideas, your creativity, your solutions to problems, your insights about things, and your insights about yourself:

• Provoke or induce *some* initial impression or internal experience, which will serve as a *starting* point for description.

• Describe that impression as soon as you are experiencing it - which will make you aware of other impressions relating to it, which you also are to describe. (Preferably, describe *to* a live partner/listener. A tape recorder, the picture of a friend, a bust of Beethoven, or your dog or cat will do if you lack a friend to act as live listener, but the live friend is more of a focus and can help more besides by asking questions *about* the experience, questions which encourage awareness even further.)

• Describing that initial impression will make you aware of other impressions relating to it. Describe these, too, as they come up, to become aware of still other impressions relating to these. Continue describing these.

• In problem-solving, you want to start in *some* relation *to* the problem but not *on* the problem or close to it. Too close and you are too likely to just start thinking about the problem in the same old ways and channels which have thus far been unproductive as a solution. Instead, daydream about something else more pleasant, with the expectation that somewhere among these internal experiences *is* the solution to your problem. Describing and describing your way deeper into this pleasant daydream will bring you aware of that deep-seated impression which contains the solution.

The same principle, of creating and describing internal impressions, applies to probing for self-insights, or to effectively grasping the concept of a science or of an academic discipline, or for wider fields of mental exploration.

One important datum: Work with whatever image or impression *does* come up first, however unrelated it initially seems to the goal you are working toward. Go with that first actual impression, rather than with what you *expect* to come up. The more unexpected the image, the closer your access to an original, valuable, important insight which can *surprise* you, and which you never would likely have gotten to by more conventional means.

There *will* be a logic, you will find, even if you think at first that the image or impression is way off base. Describing it will have an effect like that of removing fog from a hidden landscape: At first, we see only a few points of that landscape and we don't see what relation those points could possibly have to one another or what landscape could possibly relate to those points. But describing what's there instead of what's expected keeps clearing away some of that fog and suddenly the entire, logical landscape clicks into place. We have found our insight, we are experiencing our Eureka!, our aha! and everything belongs.

The principle of relaxation. Everyone has been making a big thing about relaxation lately — but may well be justified in doing so, and not just for reasons of health and mental health. It *is* a truism that with your sense of touch, you can feel and identify far more tactile detail with

your hand relaxed and open than with a tight-clenched fist. *Everyone* is or has been habitually white-knuckled about at least some things; most of us are white-knuckled about a lot of things - and have been for so long that we aren't even aware of it. If we can relax and let go of some of those knuckle-whiteners, a rewarding and astonishing wealth of new information and new insight comes immediately into view.

Many people still think of relaxation in terms of sitting in front of a TV set with a can of beer in hand. That is anaesthetic and distractor, not relaxation and enlightener, and in the long run more deadener than enlivener. When we refer to relaxation here, we mean any of a vast number and variety of calm modes-of-being whose physiological and mental effects are in line with the benefits of sleep, but which are far more profound than sleep.

The benefits of profound relaxation *per se*, even *without* using it for special purpose, are so profound that thousands of people have spent hundreds of dollars and countless hours of effort and practice to experience it. Because everything works better from a state of profound relaxation, we in Psychegenics prefer to *use* that relaxation for other purposes as well. The insight-reaching processes we use will work pretty well even without relaxation, but relaxing first will make them (and most other things also!) work a lot better for you.

Furthermore, our experience is that one learns and reaches more profound states of relaxation more easily when he uses these to pursue these further purposes, than when his goal and training is specifically and entirely to train profound relaxation.

The principle of your breath. Ten to fifteen years ago, when I was still studying to become an educator, I used to marvel at how, despite most people's having children, and despite the billions of parent-child relationships already experienced thus far by the civilized human race, no one until Jean Piaget (the Swiss researcher) ever really looked at his own children closely enough to discover the patterns of intellectual development in children. (Piaget, now all the rage in American educational circles, was not even a psychologist; he was a biologist, and his first papers were the records of his observations on the behavior of oysters!)

Of all those billions of parent-child relationships, I used to marvel, only one was looking closely at what's right there in front of everyone! What else, I mused, could we be overlooking today that's equally common to experience?

I used to pose that question rhetorically to my students, but never really paid it much heed until much later when, in various other contexts, several similarly obvious/overlooked matters made themselves apparent. One such discovery (or rediscovery, it seems) has to do with something even *more* common to experience than are children: the *breath*. Your breath.

What a shock to realize in retrospect that every experience and every kind of experience has its own breathing pattern attached to it. Not just physically-exerting experiences, but intellectual and emotional

experiences as well. We all breathe differently when glad, sad, mad, bad, bored, frustrated, relieved, happy, having an insight, experiencing beauty, giving or receiving affection, thinking well or poorly of ourselves, when things are going well or badly for us, and so on! In retrospect, the reader will also find this true for himself or herself - so much so, in fact, that most of us will discover that each of us has unconsciously been steering ourselves in our interacting with other people, according to the changes in those other people's breathing that we unconsciously detect!

The *significance* of this discovery, other than its being such a universal of human experience however unnoticed, is that human affairs and human organisms are so intra-active that no human situation is only *one-way* cause-and-effect. *Not only do various types of experience cause various types of breathing, various types of breathing can be used to PRE-DISPOSE various types of experience.*

You may use your breath to predispose your system toward: arriving at insights, taking in beauty, getting calm and comfortable about situations or matters which had been bothering you, being well-received by others, being creative, getting clear about problems which had been confusing, getting well....and so on.

In a way, this is not a new discovery: Yoga breathing techniques go back thousands of years - but there the basic insight was lost amidst the trappings and elaborated details which accumulated during its transmission through centuries of broken-down civilization. In the 1910's and '20's the French obstetrician LaMaze observed animals giving birth and abstracted from that a system of relatively painless childbirth based on breathing patterns. Occasionally, political prisoners and prisoners-of-war under torture have reportedly discovered that so long as they were able to keep their breathing slow, calm and deep during torture, they were able to remain pretty much okay — and since I started talking about the matter, several participants in Psychegenic workshops have mentioned that they had discovered this principle in the dentist's chair — but that it hadn't occurred to them to apply the same principle and practice to other situations of discomfort elsewhere!

Breathing in the pattern we use when experiencing great relief, predisposes our system to become relieved of whatever had been bothering it. Instead of training people in the technical details of moving which ribs whatever which ways, we find use of mental images more effective. Imagining and breathing as if one had just taken off a heavy suit of armor - really getting *into* that imagined experience and breathing accordingly - automatically guides the breathing into the desired pattern.

Breathing in a way associated with profound insight (there is a little of this involved with the "Innate Learning" methods of Psychegenics' *Project Renaissance* which help to speed some forms of learning by a hundred or more times) or in the ways associated with profound experience of beauty, can enrich living more than most people could dream is possible.

Breathing in a calm pattern, or in a pattern which is calm but with a real or imagined deliciously satisfying aroma rewarding each deep slow breath, has the most profoundly calming consequences not only for dealing with situations, past or present, and which until now were distressing or disturbing, but also for people whose distresses have generalized to the point where they are emotionally disturbed. It is this aspect to which we want to bring the attention of therapists generally, for one of the uses of these simple breathing patterns is to enable people to clear themselves of the effects of emotionally-involved problems so quickly and easily that it just does not seem possible. Yet this is easily tested for oneself or on volunteers experimentally, or on patients who have enough attention-resources available to follow simple instructions.

A calm-breathing pattern we have named "noise-removal breathing" is a way in which to get comfortable with any pain, discomfort or distress, present or past. Scripts instructing in noise-removal breathing are found in various readily-available Psychegenic publications (Wenger, 1976, 1977, 1978 and Azcar, 1977). These offer step-by-step ways we have found best thus far for enabling two initially inexperienced persons to train each other in the skill. Once "noise-removal breathing" has been made so practiced in experience that it is virtually reflex, it can serve as a very superior form of anaesthetic (or, if chemical anaesthesia is used, this breathing pattern can very rapidly clean up the resultant damage and aftereffects).

Cleaning up emotionally-related difficulties (and sometimes physical ills created by those difficulties) is a broad experience becoming common among some graduates of Psychegenics training, and to judge by repeat orders for printed Psychegenic instructional materials received from some therapists and clinic s, common also among various groups of patients.

One reason why: The breath is part of the "automatic" response system of your body. You've been breathing all this time since you started this paper, for example, without your consciously having to "make it go." Yet your breathing is also part of your "voluntary" response system in that you can deliberately, intentionally, breathe high, low, front, back, left, right, fast, slow, or whichever. In other words, your breath is a bridge connecting across to the "automatic" response system of your body, through which you may communicate with and direct the various "automatic" response systems of your body.

Not only do mind and brain run every process of the body, the processes of the body affect brain and mind. A good example of how body processes run brain and mind is in the instance of extreme stage-fright - an anxiety so pervasive that consciousness is narrowed to a tiny focus on incidental minutiae and little awareness is available to the victim's response repertoire for dealing with the situation. At the other extreme is the experience and response repertoire of the person who, unlike most people, has gotten comfortable with most of the matters which previously and unconsciously, had been bothering him — this excellent feeling, highly competent, zestful and creative state is easy and

swift to attain through use of the breath.

If one had been agoraphobic, for example, afraid of open spaces, he can hold to a calm breathing pattern while dealing directly with (or even just thinking directly about) being out-in-the-OPEN. We have found that no matter *what's* going on, one *can* keep his breathing slow, calm, deep, deliberate and rewarding (or in whatever other pattern for that matter). Panic, pain or whatever other undesirable distress or emotion, *simply cannot co-exist for long in the same psychological space or frame of reference with such calm breathing.* The breathing can be kept going. The distress has to go - and it does!

Once one has developed "noise-removal breathing" and "satisfaction breathing" and/or other calm breathing patterns to the point where these are sheer reflex, he can "go in after" anything and everything which has bothered him, face each such present or past distress directly for several minutes while continuing this calm breathing — and apparently free himself entirely of distress in relation to each such confronted experience.

Behaviorists will contend that such breathing simply reconditions the responses of the system relative to the once-distressing stimulus. Other branches of psychology and therapy may contend that there are other reasons why such simple breathing patterns can be used for such profound effect — discharge therapies, for example, may find (if they can get over their conviction that one must *really* re-suffer in order to get well) that this "noise-removal breathing" literally removes distresses as if distress were a form of substance. In information systems - of which the human organism is one exemplar - "noise" acts in ways precisely, mathematically, structurally identical to an interfering substance - and distress is a major form of "noise," as we shall see later. Analytic and/or insight-based therapies will contend that the calm breathing is a way to bridge gaps in internal communications without the customary pyrotechnics, and that in any case it is the bridging of those gaps with insights which enable the system to normalize its flows and functions and levels of development.

For whatever reasons, people have been finding various of these Psychegenic breathing patterns an astonishingly swift and easy way to get "right" with themselves and with their situations.

From a behaviorist viewpoint, these discoveries have given us a real concern that some present forms of distress-release, primal-type therapy may in some instances do more harm than good. It *is* good to get rid of the load of distress, with whatever acceptable way will "get it off the chest" and out of the system. But some who come through such a therapy seem to have a distressed way of responding to *everything*, and we wonder if this isn't because distress-release is the latest experience of so many various situations. Primal-release-type therapies may still be beneficial *IF* the patient's final experience of the thing which had distressed him is some minutes of deep calm-breathing *with attention squarely upon* that which had distressed him. The calm-breathing pattern we have found so far most effective (seemingly permanently) in

finishing off a distress is 3-5 minutes of what we call noise-removal breathing, followed by 2-3 minutes of what we call satisfaction breathing.

Another example of body-brain-mind interplay comes from imagining - as clearly and vividly as you can - standing on some narrow precarious ledge 40 floors up. Picture and feel that precarious-ledge situation as absolutely as you can....Now feel where that experience is stressing in your body....

Now let go of that feeling, of course. If that feeling had been allowed to remain "locked in" to those stressed parts of the body, you would be going around feeling precarious, and possibly finding various *reasons why* this or that situation was disquieting. *But:* In point of fact, nearly everyone *has*, locked into their bodies, some counterpart(s) of that precarious-ledge experience - guilt, fear, or even some physical hurt - so pervasively that it isn't even noticed, yet it keeps on shaping our ongoing experiences, even our very bodies, and creating self-fulfilling prophecy-type situations - and all the other major and minor maladjustments flesh/mind is prone to. Psychegenics teaches ways to focus breathing patterns on stressed areas of the body to remove the pattern of being frozen on that ledge. Sometimes just the physiological effects of such freeing-up of the system can be quite astonishing - as you can well imagine!

There is far more to this matter of breathing/self-reconditioning, and of breathing generally, than we ourselves can hope to get around to investigating any time soon. We also face a similar problem with each of a half-dozen major tracks of discovery other than the breath, which now confront Psychegenics. Qualified therapists of whatever discipline are invited to write Psychegenics, both for operational information on processes and programs which can be used for therapeutic purpose, and for suggested areas needing formal research. Meanwhile, individuals may arrange use of these and many other processes either through direct Psychegenics training, or by acquiring various of the materials which step-by-step teach use of some of these processes - or they may use this paper for similar purposes.

Psychegenics generally is oriented on upward human potential rather than on patching people up to being okay. Psychegenics *per se* is not practicing therapy but teaches educationally, though it does and will share the appropriate results of its research with those who are qualified to practice therapy. Everyone else can take most of these same results and press them into service of a far wider and even more rewarding range of purposes than that of just therapy.

The principle of visualization. You can use your mind to enhance any act, mental or physical. For example, you may test this principle by turning your head to one side as far as you can, noting how far that is by how far you can see behind you on that side. Return to normal position; next IMAGINE turning your head several inches further. Now, again test how far you can turn your head physically. In most instances, readers will actually have gained an inch or so!

With a friend, test the same principle; this time by extending your arm, resisting while your friend forces that arm down against that resistance. Now extend that arm again, but this time IMAGINE your hand being hooked over and braced upon a nearby windowsill or bookshelf. Your friend will most likely find a much stronger resistance this time.

Scientific tests can be made simply by taking a roomful of people who are unfamiliar with the topic and don't know what to expect. Print up the above instructions for half of them, some other set of instructions for the other half, seal and scramble the sets of instructions so you won't know until later who received which set; then proceed. Those who used the imagery as per the above instructions, will more often show more gain in effect than those who received some other form of instruction.

One can find a suitable imagination-image to enhance any physical act. This principle is useful for any tasks or training which requires strength-speed-endurance-agility or other skill. Athletics, where performance already is all-out (and calibrated) will show especially well the effects of using this principle.

Some of the reasons can be found in the distinction between your automatic and voluntary response systems. The first time you turned your head or stiffened up your arm, you were using your voluntary muscles, as you do in almost all your behavior. The second time with the imagery, you engaged your automatic musculature and its response system and strength as well. You were, and will easily on countless occasions, be using the same "hysterical" strength as all those little 90-pound ladies' lifting trucks up to free their respective children trapped underneath. Only, I must say, that strength didn't feel very hysterical, did it? Instead, because so much more of the resources of your system are engaged in what you are doing, what you are doing becomes far easier, even restful. Using your extra strength in this manner is nowhere nearly as wearing on your system as ordinary exertion is until/unless you expand what you are doing to where it fully exerts this wider set of your resources!

Another sector of the same principle: The conscious mind can deliberately modify physiological functions normally regarded as automatic. Biofeedback has demonstrated this point for several years. Another way to demonstrate this point is to link up to some bio-monitoring equipment (heartbeat, galvanic skin response, etc.) and think for one minute each, upon those experiences which were sad, glad, bad, mad, frightening, reassuring, joyous. Even the most unimaginative citizen, wholly without training in mind-work, can push his supposedly automatic physiological patterns of response all over the graph.

Without such equipment the reader can easily check this for himself the next time his hands or feet are cold. To easily warm his hands or feet, simply *imagine* his arms or legs to be a foot or so longer than they actually are! For added effect, imagine reaching *through* where your hands or feet are, toward some distant object. Chances are excellent that hands and/or feet will warm appreciably in a very few seconds. To warm one's extremities so easily by mental means is fine for comfort or

as a stunt, but what could it mean to the very survival of the elderly, so many of whom suffer peripheral circulation failure?

The principle of energy. Every living organism, cell, and tissue, generates its own living electric field. At least some of its bio-energy field is electrical in nature and has been measured extensively by scientific instrumentation. These fields are also tangible to the sense of touch, though faintly enough so that most people need some training initially to sensitize themselves to where they can feel that field. Once one is able to sense these fields tangibly, he can change them and produce effects with them.

These biological energy fields, controllable by the mind, appear to play as complex and important a role in the functioning and maintenance of the body as do the body's more concretely physical elements.

Rather than refer to the rapidly growing body of literature on scientific measurement and testing of such fields, we suggest the reader *now* establish to his own satisfaction the tangibility of his own fields.

The following procedure is not properly a Psychegenic ("Psyche" = mind, "genics" = derived from, "Psychegenic" = those effects derived from or through use of the mind *per se*) procedure, but it *is* a good short-cut to experiencing, verifying the existence of, and training sensitivity to, your own biological energy fields. We urge that you try the following procedure now, rather than let the matter remain as merely theoretical.

1) Remove watch, rings, other objects which could be dislodged from hands or arms through violent motion.

2) As if you had touched a hot stove with both hands, shake/fling both your hands loosely, rapidly and violently from the wrist, with real snap. Fling hands and fingers with a real snap in such a manner as to place considerable centrifugal force on the fingers and fingertips.

3) Continue this hand-flinging as violently as you possibly can, for three minutes or longer until hands and especially the fingers are tingling violently.

4) Now study how that tingling increases when the fingertips of both hands are brought closer together, diminishes when they move apart.

5) Without touching, slide the fingertips of one hand very closely past the fingertips of the other to feel the SHAPE of the energy field surrounding each finger.

6) Continue studying whatever you can detect of changing sensations in your hands and fingers as you manuever your hands around in close proximity to one another and to other things around you. If necessary, refreshen your finger-tingling a few times by repeating the above procedures, until you can clearly detect the changes in sensation produced by changes in the relative positionings and movements of your hands in close proximity to each other.

(You may find sensations other than just electric-like tingling: Sensations of heat, cold, pressure, whatever, or some combination of these. "Go with" whatever kind of sensation your hands report, and get

familiar with that sensation and how it relates to hand-movement and position. It is the *change* in hand position which generates the *change* in energy-field which is most easily felt.)

At your earliest opportunity, go one step further and have a friend go through this procedure with you, both of you doing it simultaneously, so that each of you can feel each other's living, tangible energy fields. This is no longer a matter of speculation or theory, but a living, tangible reality you can perceive directly, and which you can act upon to produce effects with.

All of these principles - the principles of:

*Description
*Relaxation
*Breathing
*Visualizing
*Biological energy fields, and
*Noise-reduction,

are important working principles in Psychegenics, and like the fresh discovery of any major law of nature, are about to become recognized important working principles in your life, giving you tremendous new leverage.

Why?

First: To live *is* to grow, to explore new opportunities. You are alive. You didn't pick up this paper on problem-solving because you have problems — if problems were the main factor, your blood sugar and energy would be low and you wouldn't have felt like taking on anything new. Instead, you picked up this material because whatever the problems you wish to solve, you are more alive than most people, and at least half-way ready to grow.

Second: To ask why learn these new skills is like asking, why learn to read? The fundamental skills taught here are as comprehensively useful, as "omni-engageable", as is the art of reading. Some day, hopefully soon, nearly everyone will enjoy these skills just as several centuries ago, a majority of our culture became literate. Today you and I are in the moral equivalent of a pre-literate society and face similar problems in explaining *why* the skill in question should be acquired: "Well, uh, to read road signs....and instructions for cooking different foods....and medical prescriptions....and for access to better jobs....and, uh, to find out all sorts of things...."

The full thrust of reasons why one should learn to read cannot be grasped in a pre-literate society. One can at best name a few understandable advantages. And those advantages *are* real enough and meaningful enough, insofar as that goes.

The principle of testing matters first hand. "Look in my telescope," said Galileo, "and you can see for yourself, with your own eyes, that things are different from how the Authorities have described them to us."

"Preposterous!" said the Establishment, not looking. It shut him up, and that was the end of that (almost).

People went ahead and started to look in telescopes with their own senses at the world around them and came to their own conclusions about its nature. That was the birth of science.

Today, with far greater stakes of arrangement, knowledge-structure, institutions, power and wealth, truth may again be hostage and people-at-large disinclined to take on the risk of new perspectives. Even if you are "anti-Establishment" you, too, may have some stake in your present arrangements and perspectives - some of what you discover with your own sensings through this material as your new telescope, could be uncomfortable at first. As we'll be saying later, "breathe through" that discomfort and far wider, more rewarding worlds await you.

Dealing with the paraphernalia, bureaucracies and vocabularies of science does *not* make one a scientist. What does make one a scientist came into the world when people started looking through Galileo's telescope with their own eyes, and then started making better telescopes of their own!

Unthinking, automatic rejectionism exists as much today as it ever has in any time of history, both in and out of science, both in and out of establishments and counter-establishments. In our own times many utterly fundamental breakthroughs, some affecting drastically the most vital aspects of living and others bearing on the continuance of life itself, have been dismissed out-of-hand; only those few which survive this process are the ones we learn about and which make it into the records of public knowledge (Wenger, 1972). Frequently, people who should know better have been heard to dismiss even Psychegenics because "nothing can be that good" or because "too much is claimed for it." A little question: What if the various things you have heard about Psychegenics ARE true? What could this mean to your life, your profession, your firm, your family, your friends, your community?

You, fellow-scientist, don't need any governmental appropriations, approval of officials, or permission from anyone or anything except yourself, to discover for yourself where the truth of matters is. Don't wait for someone else to determine the truth for you - you might have a long wait. And don't take our word for things any more than you should take anyone else's. Scandals in government and medicine have certainly demonstrated that point for us in our time.

It certainly IS easy for you to test matters for yourself. Where you are sitting at this moment, if you have not already done so you can easily enough test the arm-prop, neck-twist, or hand-flinging energy field effect which illustrate various principles of Psychegenics. The rest of this book, *Psychegenics*, is not to tell you what the nature of things is or any other theory; the rest of this material is something better than that: It is a telescope by which you can discover, for yourself, with your own senses, the rewards and realities which are there to be discovered.

And you really wouldn't want to miss the fun of the viewing!

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Abstracts from the Bulgarian journal

Suggestology and Suggestopedia

Lozanov, G. The suggestological theory of communication and instruction. *Suggestology and Suggestopedia*, 1975, 1(3), 1-13.

Suggestopedic instruction attempts to coordinate training and education with the fundamentals of suggestology with these three principles: interpersonal communication is in general always both simultaneously conscious and unconscious; every stimulus is conditioned, coded, symbolized, and generalized; and each perceptual input is complex. The author reports on studies showing that *peripherally* perceived unconscious information is the basis of long-term memory.

The author details several experiments reporting that the trio that was specifically to be learned was learned with the usual curve of forgetting. However, material that had been only peripherally called attention to was also learned with a curve of recollection that showed improvement rather than decrement in the following days after learning. These experiments led to the more frequent use of peripheral perception as a suggestive factor in the teaching process. The complex process of perception at several levels was discussed. Best teaching occurs when the actor-teacher presents a good and convincing performance such that communications are harmonious or consistent both at the verbal and non-verbal or emotional levels. Music and art offer considerable potential as carriers for this sort of harmonized communication in teaching.

Suggestopedia operates on the basis of the principles of joy of learning without tension, unity of the conscious-unconscious minds and the suggested interrelation of principles and activities in the teaching-learning process.

Shurnova, N. L. Progress in experimental instruction in the course of suggestology at the 'V. I. Lenin' Moscow State Pedagogical Institute. *Suggestology and Suggestopedia*, 1975, 1(3), 14-23.

This study was concerned with two efforts, a one month suggestopedic course on general and basic language learning, followed by a second month specialization course to provide students with a vocabulary specific to their own area of specialization.

Groups of students taught the conventional ways were compared with experimental groups learning English, French, and German. Typically, the suggestopedically taught group showed approximately three times as much vocabulary assimilated and learned with approximately 90% retention as compared with the control groups. The difference in achievement in these two groups of students was attenuated to some extent because communication between the experimental and control group's students was not eliminated and as some students in the control group tried to learn the dialogues of the experimental course. The experimental group students showed a high esprit de corps, but they were somewhat behind the control group on writing. A second series of experiments was done to improve matters and the writing and creative

ability of the students in the experimental group were comparable then to the students in the control groups. In addition, the students had also learned approximately three times as many words as had the students in the control group. Thus after two month's effort, students were able to read newspapers and to work in their own area of specialization.

Lozanov, G. & Balevski, P. The effect of the suggestopedic system of instruction on the physical development, state of health and working capacity of first and second grade pupils. *Suggestology and Suggestopedia*, 1975, 1(3), 24-32.

This study was designed to establish the effect on development, state of health, and working capacity of first and second grade pupils in Bulgaria as a result of being exposed to the Lozanov Suggestopedic Learning Material. Experimental and control group schools were chosen both in Sofia and in comparable small villages. For the experimental schools, the usual materials were taught approximately three times faster than in the conventional schools for control with the usual rate of teaching the conventional first and second grade material. That is, the entire year's work for the control schools was taught in the first three and a half months in the experimental schools with the suggestopedic method. In addition, much of the material for the next or following year was also taught in the same initial three and a half month period. For the rest of the academic year, the students studied Russian and English to fill in. The data were collected on height, weight, chest capacity, pulse, blood pressure, illness during the year, physical fitness such as the 50-meter run, throwing the ball and stationary jumping, mental working capacity and motor reaction along with speed and accuracy in doing proofreading. Piaget's matrices were also used to study logical thinking development. With very few exceptions, there were no physical, physiological or physical fitness variables that were different between the students in the experimental and control classes. It is interesting, however, that fewer experimental students lost weight during the school year than the control school and fewer experimental students worsened in the 50-meter run than control students.

To sum up, there were no appreciable differences between the experimental and control groups with respect to their physical development, physical fitness, reactivity and logical thinking. There were several significances. The mental working capacity of the pupils in the experimental groups after school hours was higher than those in the control groups, particularly after mathematics lessons. In addition, there were far fewer absentees among the experimental students than there were in the control group, essentially one-half as many.

The data in this report affirm the complete safety of the suggestopedic system of instruction for the physical development, working capacity, and health for elementary pupils.

Rabcsak, M. Results of the first suggestopedic foreign language courses in Hungary. *Suggestology and Suggestopedia*, 1975, 1(3), 33-38.

In the first suggestopedic foreign language courses in Hungary, twelve persons learned German and eight English. The students were unanimous in noting that after the lessons they felt no fatigue but even

felt refreshed. By the tenth day of the course, students who had started from an initial level of zero had caught up with students who had had some preliminary knowledge of the language. The effect of missing the music review sessions was singular, that is a student who had missed a music session for one reason or another failed to master that material and this loss was felt throughout the course. In a normal foreign language course after four years of instruction in secondary schools, students have mastered from two to three thousand words. In contrast the students after 23 days in the suggestopedic first course had mastered nearly 2,000 words of which they actively used 1200 to 1500 words readily in conversation. In a test of retention 45 days after the course, a few people showed a drop of one or two per cent, but most students showed an increase of several per cent in remembering the material.

The suggestopedic method is felt to be extremely effective because it produces better results and is quicker than other previous methods. Suggestopedia can be called a pedagogic direction which is capable of revolutionizing the entire system of teaching.

Kolarova, D. & Balevski, P. Neuroses and suggestopedic instruction in a foreign language. *Suggestology and Suggestopedia*, 1975, 1(3), 39-46.

Several earlier researchers had reported favorable results using the suggestopedic method as psychotherapy for the treatment of neuroses. Neurotic students (n= 58) and healthy students (n= 143) were compared on tests of oral suggestibility, logical thinking, progressive memory matrices, visual and auditory memory tests, perceptual letter cancelling, and arithmetical problem solving. The clinical, physiological, psychological, and pedagogical data results confirm the fact that the suggestopedic teaching system had a beneficial affect on neurotic patients while studying foreign languages. Even when the mental working capacity was disrupted, the neurotic students achieved fairly well in the foreign languages. Moreover, the neurotic students did not achieve as well as the healthy students. The neurotic students were more open to suggestion than healthy people although the suggestibility of the neurotics decreased from the beginning to the end of the course. The degree of improvement in the neurotic patients was as follows: marked improvement - 22%, high improvement - 51%, no change - 26%, deteriroated - 1%. Thus suggestopedia is a very promising remedial method with neurotic patients or students.

Balevski, P. & Ganovski, L. The effect of some of the means of suggestion on the short-term and long-term memory of students from 11 to 17 years of age. *Suggestology and Suggestopedia*, 1975, 1(3), 47-52.

The research in this paper studied the effect of suggestive instruction, intonation and music on the volume of the short-term and long-term memory of adolescent students. A total of 100 experimental and 100 control students at each group was studied in the age range from 11 to 17 years. At each level there was an equal number of males and females. The task for both the experimental and control groups was to memorize a list of 15 adjectives presented at a rate of four seconds with a pause between words. The experimental treatment consisted of telling the students that a memory experiment was to be carried out with them in

which words were to be read to them with special intonation against a background of music, Beethoven's *Moonlight Sonata*. It was stressed that this novel method would have a favorable effect.

For 13 and 14 year olds, the volume of short-term memory was significantly less for the experimental students than the control students. This was interpreted as probably due to psychophysiological characteristics of puberty. For students ages 15 to 17, however, level by level there were significant differences in favor of the experimental treatment, for the acquisition test. When checked one week later, with one minor non-significant reversal, the differences all favored the experimental treatment group.

The use of suggestive instruction and special intonation with a background of classical music contributed significantly to increasing the volume of the short-term memory for some teenage students and helped the long-term memory of most adolescent students.

Angelov, A., Stomonyakov, V., Boef, L. & Theresharov, L. Sensory evoked potentials in suggestive verbal instruction. *Suggestology and Suggestopedia*, 1975, 1(3), 53-59.

This research studied the way in which verbal instructions affect the bioelectric activity of the brain, particularly the P-3 average evoked brain potential in man. The study gave three different series of auditory tone signal sequences to the experimental subjects. Series 1, the indifferent series, was made up only of high tones whereby the person was told to sit still and do nothing when listening to the sequence of high tones. The second series consisted only of low tones and the subject was instructed to sit calmly, but to respond by pressing a button as soon as he heard a low tone presented. The third series was called pseudo-mixed because the person was told that he would hear a random sequence of low and high tones, but in reality he heard only high tones with no motor response required. The fourth sequence was the real mixed series made up of randomly alternating high and low tones with the person giving the response motorically only to the low tones. EEG potentials were recorded from the vertex to the left mastoid.

Typically in the pseudo-mixed series, there was a positive peak averaging 300 ms. from the onset of the stimulus tone whereas this P-3 peak was absent for the indifferent or the real mixed series. The authors conclude that these results reflect the process of stimulus probability assessment in the brain's activity.

The effect of suggestion in the instructions in this experiment are different with some individual differences shown. The P-3 component can be used to assess these individual differences. Some experimental subjects retained the P-3 component throughout all pseudo-mixed series whereas in other people the P-3 component changed during the history of presentation of a series of pseudo-mixed signals. In this group, the subjects showed insight that there were no low tones present. Still other subjects apparently perceived some occasional low tones in the pseudo-mixed series and responded with a motor response.

Tanchev, F. Experimental research into the perception of the suggestive element in artistic translation. *Suggestology and Suggestopedia*, 1975, 1(3), 59-62.

An artistic translation should reflect the artistry of the original creator. By suitable means of expression such as rhythm, intonation, emotional content, peripherally-suggested ideas, second plane meaning, corresponding to the original, an artistic translation should reflect the original suggestive atmosphere and create the emotional esthetic impact of the author prior to translation. To test this, an experiment was carried out in two schools in Sofia with 218 students in the tenth grade. The pupils were given three different translations of a poem by a French author. Students were queried as to the translation preferred and to the feelings invoked in the pupil by the translation.

The results obtained were in agreement with the assumption that the more successful translation did indeed exercise the suggestive effect of the original author in his poem.

J. of Suggestive-Accelerative Learning and Teaching, 1978,3(1)

The Effects of Suggestive-Accelerative Learning and Teaching (SALT) on Creativity

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(Under the direction of E. Paul Torrance)

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The purpose of this study was to examine what effects Suggestive-Accelerative Learning and Teaching (SALT) has on the creativity of low and middle socioeconomic status (SES) fifth and eighth-ninth graders in central Iowa. SALT, based on the Lozanov method of suggestopedia is an instructional method directed toward tapping the reserve capacities of the learner through conscious and especially unconscious means. If SALT can make learning easier and up to five or more times faster than "conventional" teaching methods, but at the expense of student creativity, the method would have limited value. Though the underlying principles of SALT and creativity appear compatible, only one experiment specifically investigated this relationship and found that creativity was encouraged.

A 2x2x2x2 nonequivalent control group design was used with univariate analysis of covariance to determine the effects and interactions of treatment, grade level, SES, and sex on 11 verbal and figural creativity variables derived from raw scores on *Torrance Tests of Creative Thinking*. One hundred seventy-five pupils (the sampling unit) were exposed to SALT for six-to-seven months by previously trained teachers. Comparison groups met the assumption of homogeneity of regression for 10 of the 11 dependent variables. Results from four auxiliary studies indicated that uncontrolled effects of pretesting, history and maturation on posttest scores were small.

SALT significantly increased creativity as measured by five variables: verbal flexibility, figural fluency, flexibility and elaboration, and the number of creative strengths. The direction of differences favored SALT for all 10 dependent variables. Significant differences in creativity were found favoring fifth graders on verbal originality, figural fluency and flexibility, while a difference favored eighth-ninth graders for verbal flexibility. The direction on differences due to SES favored middle SES subjects for all 10 measures of creativity, five of which were significant: verbal flexibility, originality, figural elaboration, abstract titles, and creative strengths. Nine first order interactions were found involving treatment, grade and SES.

J. of Suggestive-Accelerative Learning and Teaching, 1978,3(1)

BOOK REVIEW

Lozanov, G. *Suggestology and outlines of Suggestopedy*. New York, N.Y.: Gordon and Breach, 1978. Reviewed by D.H. Schuster, Iowa State University.

This is the basic book on Suggestology/Suggestopedia and background as developed by Dr. Georgi Lozanov at the Suggestology Research Institute in Sofia, Bulgaria. Dr. Georgi Lozanov is an M.D. in psychotherapy turned educational experimenter and researcher in Bulgaria. Chapter 1 starts out with a review of how Dr. Lozanov himself got interested in the subject of super-memory, or as he euphemistically calls it, hypermnesia. Lozanov apparently was intrigued in the early 1960's with the performance of certain yogis whom he saw in India demonstrating unusual feats of memory. At that time the yogis involved had studied intensively for three years of special training to develop this hypermnesia.

Chapter 2 then continues Lozanov's account of the early experiments done in Bulgaria in pedagogical research with the first Western attempts to duplicate what the yogis had demonstrated. Beginning in 1965 at the Pedagogical Research Institute in Sofia, Lozanov initiated French and English as experimental foreign language courses. Students were taught approximately 80 to 100 words a day with the developing method. Later students were taught 500 new French words from a standard French textbook in one day (4 hours) and on a test of immediate retention the next day, the students scored approximately 99% correct. Subsequently, I. Dimitrova at the University of Sofia gave 1000 French words in one day to 15 male and 15 female students, who on a subsequent check got approximately 98% of the words correct. However, the initial presentation had been followed by ten days of elaboration and activation. As a result of these studies the Suggestology Research Center was started in Sofia in October 1966.

Having demonstrated empirically that people could learn much more than they thought at a given time, Lozanov proceeded, as detailed in Chapter 3, to develop a huge review of the literature of the suggestive elements found in many different topics. The bibliography has over 1000 references. Lozanov systematically reviewed psychoanalysis, existential psychology, Gestalt holistic psychology, the literature on conditioned response and cybernetics. He paid particular attention to the Russian researchers Uznadze, who worked with the psychological suggestive set-up for learning, and Bassin, who showed the functional learning abilities of the subconscious mind. Lozanov continued his review with the psychological epidemics, or fads, that have swept through Europe; group psychotherapy, social conformity, abreactions, integral group psychotherapy and the influence of bioenergetic fields. Lozanov concluded his review with attempts to find out what psychologically could mediate or produce the super-memory phenomenon that he had explored. Dr. Lozanov looked specifically at Barber's views on hypnosis and agreed with his conclusions that hypnosis was not a special state, but merely an attitude with high motivation and an expectancy that huge learning was going to follow. These attitudes fell in line with what Lozanov had discovered. In addition, Ash's experience on group conformance also gave some hint as to a plausible mediator of the super-memory. This chapter in the book, because of its wide range of review, badly needs a summary; this would have helped immensely.

In Chapter 4, Lozanov develops a general theory of suggestion and continues his review of suggestibility research. He specifically mentions Eysenck's multiple factor theory of hypnosis wherein the first factor has to do with motor responses and motion, and the second factor has to do with imagery suggestion. A third factor which has not been completely explored has to do with the change in attitude and possibly with prestige. Lozanov then defines suggestion as reprogramming the direct incoming stream of sensations that impinge upon an organism. Suggestion also is a dialectical, "desuggestive-suggestive process to reveal the functional reserves of the mind. Finally, suggestion regulates the organism's activity and organizes the functions on specific mental level. Additional features of suggestion as a phenomenon are its directness, automation, speed, elasticity, precision and economy.

Lozanov proceeds to review other relevant research, namely that of sleep, paradoxical sleep, presenting words subliminally with the whispering method (which incidently has failed in attempted duplication in this country). The point is made that you must find an optimal level of loudness and intonation in the whispering, or the effect may be due to autosuggestion in the specific therapy sessions. Marginal and peripheral subsensory stimuli are important, a fact only now beginning to be realized and documented in research. Lozanov claims that the peripheral unconscious stimuli and information so presented are at the basis of long-term memory, super-memory. Lozanov continues his review of suggestion as applied to a herniotomy operation without anesthesia for which he is famous and videotaped. Suggestion has also been applied successfully to ulcers, allergies, rashes, diabetes, stuttering, as well as myopia. Lozanov gradually went from hypnopedic experiments to suggestopedic experiments wherein suggestion is used without a formal hypnotic induction.

Lozanov then develops a case for what he calls nonspecific mental reactivity (NMR) as the basic mechanism behind hypermnesia. As part of this, there are barriers that must be bypassed, not necessarily broken down. These three barriers are the logical or rational, emotional or attitudinal, and ethical barriers. These three barriers in persuading a student to learn better can be complied with by appropriate psychological techniques, but not necessarily forcefully overcome. All aspects of suggestion then lead to the acceptance of suggestion as the ultimate conclusion of a solid, well-developed logical structure that mobilizes the hopes and ambitions of the subject in whatever he or she sets out to do.

Next reviewed for their relevance to suggestion are the method of reverse suggestion, autogenic training, relaxation for memory, age regression, and peripheral subsensoriness. This last simply means that memorization is helped at times by directing attention to the flow of communication, not focusing one's attention on memorizing words. Thus, how the material is presented is much more important than what is said. This implies that the art of presentation is a critical contributor to suggestopedia.

There are two types of processes that contribute to facilitating super-memory. The first is a group, autosuggestive process dealing with the infantilization-psuedopassivity of the students. Group only processes are those of authority, double-planeness, intonation and rhythm. Lozanov proceeds to present the results of his research on these six means of implementing suggestion, and they give some hint to the teacher as to what he or she can do in the classroom. Infantilization here does not equal infantilism, but merely refers to the fact that students at some point in the suggestopedic process learn the material with a childlike expectant manner; they do not necessarily behave childishly.

There are three phases to a suggestopedic foreign language session, 1) decoding, explaining the material as a preview, 2) the active and passive psuedo-concert phases in which material is presented, 3) the elaboration phase or the practice phase in which material is worked on and the material is given in songs, plays, etc. These three stages also could be called stages of presenting, reproducing and producing material by the students, but from their own viewpoint, not parroting it back to the teacher.

The psuedo-passive concert session is the most important part and it has two mechanisms, a ritual placebo and readjusting the students' psychological states. Lozanov presents his research showing that twice as much material can be memorized per minute in a concert state as in the decoding phase.

Lozanov has a good summary for this lengthy chapter and makes these conclusions about the three general principles involved in suggestopedia:

1) Interpersonal communication is global and simultaneously conscious and unconscious.

2) All stimuli are coded, condensed and symbolized.

3) All stimuli are complex.

Suggestion is redefined as a continous communication process through the unconscious, whereby one's mental activity can create the conditions for tapping the functional reserve capacities of the person.

Chapter 5 is entitled "Suggestopedy, an experimental method of Suggestology". Lozanov gives some of the results of typical suggestopedic classes taught by others. For instance, a typical result is that 1600 German words were presented in 4 hour sessions per day in 31 days with the result that 94% of the material was retained. The material was presented in 15 suggestopedic sessions, 100 words per session of 45 minutes each, and then on the alternate days, students elaborated on this material and used it in their own ways themselves. Lozanov documents a new type of forgetting for suggestopedicly learned material, a linear function of time, not an exponential decrement or logarithmic decline with time as Ebbinghaus originally documented.

Lozanov also points out that after suggestopedic classes where the focus was on learning classroom material, that students typically were in much better mental and physical health. He presents excerpts of letters from former students about how their health had improved both during suggestopedic foreign language classes and afterwards.

Lozanov and his coworkers have investigated psychophysiological measures and their changes as students undergo suggestopedic foreign language learning. During the psuedo-passive concert phase, typically the incidence of beta (alert, waking) brain waves decreases and both alpha and theta (relaxed; close to sleep) brain waves increased significantly. Photic stimulation at differing frequencies was also tried during the passive review with music session. The brain waves could be driven or stimulated at a frequency of 11 Hertz, the alpha frequency, for best learning, and subjects reported less fatigue afterwards. Lozanov also reports that photic driving had some other complex effects. Evoked potentials of the brain were also studied and showed that the late so-called N3 and P4 components showed a definite change for the better during the psuedo-passive concert phase.

In summary, Lozanov documented that the hypermnesia obtained in the psuedo-passive state was accompanied by an increase in alpha brain wave production. Other research, however, has shown that this is a by-product; that is, an increase of alpha brain waves by itself is not sufficient to produce hypermnesia.

In Chapter 6 Lozanov discusses the characteristics of the suggestopedic system. The aim of teaching is to have the students understand and solve real life problems with the material being taught and not to view the material as rote memorization. Suggestopedic features are that there is a functional unity of all brain processes, that the mind is simultaneously active in both analysis and synthesis of the material being presented, and that the brain functions simultaneously at conscious and unconscious communication levels.

Characteristics of suggestopedia in practice are 1) it always taps the reserves of the mind, 2) in the relaxed atmosphere there is no fatigue, 3) training is always pleasant, 4) there is a good educational effect, that is, it softens the aggressive tendencies of students and helps them to adapt to society, and 5) there are marked psychoprophylactic and psychotherapuetic effects on functional diseases. The three basic principles of suggestopedia are, the joy and absense of tension in learning, the unity of the conscious and unconscious parts of the mind, and the suggestive link to go between the two. Essentially, suggestopedia teaches students to learn how to learn.

Suggestopedia uses three basic means to implement hypermnesia, psychological, didactic and artistic means. Lozanov uses both a holistic and analytical approach suggestopedicly. For example, students in beginning reading are exposed first to meaningful words and sentences. Later letters would be taught as parts of a picture puzzle and they would write letters and words.

Lozanov has made a number of changes since suggestopedia was first developed. As of this writing, Lozanov has dropped the three repetitions of words to be learned, or the three-way variation in intonation as one goes successively through material. This was what he called the horizontal swing where one sentence might be stated in a normal tone of voice, the next sentence might be declared in a loud, authoritative tone of voice, and the third sentence in the trio whispered. Lozanov has kept the concert session as he feels it is very important. Lozanov has dropped the active dramatic session as it didn't produce the efficient results of the passive review with music session. Lozanov has also eliminated aspects that might give some viewers reason to call this hypnosis, not waking state suggestion. Currently a suggestopedic session has two parts, a first part where an emotional classic music is played that tends to arouse the student and then philosophical classical music is played as part of the psuedo-passive concert-phase. There is a list of appropriate music for both phases.

Lozanov proceeds to give the outline of how a foreign language suggestopedic session is set up. In a preliminary session of 90 to 120 minutes, the foreign language material is gone over to familiarize the students with the material. The students are also given a psychological setup with a wide variety of suggestions at this point. The material is explained and deciphered for the students and they are told th at the following stages will fix the material in their mind, and that they will b e able to reproduce and produce the material creatively in their own style. Then in a 45 to 60 minute session, students listen silently to music while the material is reviewed, and the teacher's voice is modulated along with the music. Occasional quiet silences may intervene, Then the material is pr ented a second time with music. The students may be requested to review the material once quietly in the evening, but not to study it.

On the second day, the material is elaborated and activated. The students reproduce the material by imitation, with questions and answers, and reading. The students are led to expect that most of the material will emerge effortlessly in their mind at this time. Later the students see the material in new combinations and they are asked to use

the material creatively with psychodrama in a simulated real-life situation. New music is used, more dialogues are given, role playing is encouraged, where students are encouraged to take roles in realistic situations. The correction of errors is an important art.

A suggestopedic textbook has large chunks of information globally presented complete in themselves. The material aims at communication and it is meaningful, interesting, and entertaining. Language problems such as grammar and idioms are smuggled in incidentally and suggestion is used throughout. The suggestopedic textbook must not look like a conventional foreign language textbook even though it may have explanations. The story is lighthearted with an emotional plot that avoids trauma and negative emotions.

The following must be prepared for a suggestopedic class: 1) Train teachers and give them experience with the method, 2) prepare posters and other material for the class, such as foreign language letters that motivate the students, 3) prepare suggestopedic books, 4) prepare plays and theatrical events with the new material including scripts, 5) prepare the large lesson units, such as presenting all grade one math in 5 or 6 units, 6) train the teacher in using music in suggestopedia, 7) encourage the parents to encourage their children in their learning and to keep them motivated, but don't force homework.

Lozanov gives some details of how this is applied to teaching reading and mathematics in the first grade. In one academic year of 9 months, the entire curriculum of grades 1 and 2 and some of grade 3 was shoved into the first grade. First a theatrical opera presented mathematical theory as part of the plot. Classroom posters contained educational material to be learned, but were ignored by the teacher. The children then retold the opera story and were encouraged to redo it as didactic problem solving. The whole theme was then reviewed and generalized in poems, plays and songs. Finally, the material was consolidated with creative problem solving. Short control quizzes were given. The average percent correct was 75% or better. Sixty class days were necessary to have the students learn an entire year's work.

In terms of achievement, Lozanov found that foreign language students were able to remember 90% of the 2000 lexical units that had been presented and that they were using 60% of them actively. In terms of retention over Christmas, first grade students retained 70% of the material vs. 40-60% of the material in the control groups. At the high school level the day was shortened; that is, students left at 1:00 and they had no homework. They covered an entire normal year's worth of material in 2 months and had good results in all high school subjects.

In conclusion, this book could be faulted for not having chapter summaries throughout, for not having a detailed complete example of how to apply suggestopedia in the classroom, and for lacking a much needed index. Nevertheless, the author has presented the background and principles of suggestopedia or classroom super-memory. Any person who is at all interested in applying suggestion to education needs this book. This is the basic book in suggestopedia or suggestive-accelerative learning.

Announcement

The fourth International SALT and Suggestology Conference is scheduled for April 27-29, 1979 at Iowa State University. For further information write: SALT, Conferences and Extension Division, Scheman Building, Iowa State University, Ames, Iowa 50011. Researchers and teachers will report